

Motor technique and didactics: a possible alliance from an educational point of view

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Estratto

Obiettivo di questo lavoro descrittivo è in prima istanza quello di cercare di aprire uno spazio di riflessione sull'evoluzione dell'educazione al movimento nelle istituzioni scolastiche italiane, cercando di delineare il percorso evolutivo delle attività di movimento nella scuola dell'infanzia e nella scuola primaria in riferimento alle Indicazioni nazionali del Ministero dell'Istruzione, dell'Università e della Ricerca.

A partire da queste riflessioni, vengono evidenziate le potenzialità della corporeità per una didattica personalizzata, nell'ottica di una rivalutazione del corpo e del movimento, quali ambiti privilegiati per la formazione della persona che trovano ragione nell'adozione di una didattica del corpo che rivaluta il ruolo delle scienze motorie nell'ambito dei processi educativi e formativi, configurando la possibilità sia di *educare il movimento che di educare attraverso il movimento*.

Parole chiave: corpo, movimento, didattica.

Abstract

The aim of this descriptive study is to reflect on the development of physical education in Italian schools by delineating the milestones in the development of motor and physical activities in nursery and primary schools with reference to the national guidelines provided by the Italian Ministry of Education, Universities and Research.

These reflections focus on the potentiality of corporeality for a personalized didactics, with the aim of reconsidering the importance of body and movement

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as privileged areas for the education of the person, which finds its roots in the adoption of a didactics of the body that reinstates the role of physical-motor sciences within the educational processes, thus creating the possibility for *teaching movement and teaching through movement*.

Keywords: body, movement, didactics.

Introduction

If education aims at developing all human potentialities, consequently physical education must be properly understood and must be given its rightful place (Le Boulch, 1979; Sibilio, 2015a). The school should accomplish this task with the same interest and attention given to all the other aspects of education (Carraro, 2004).

The education to movement is a training subject since it addresses the whole personality of the human being and it performs its educational activity both on the body and the psyche of the individual.

Physical education can be included among the sciences of education and it is important in defining and constructing the educational and training processes (Lipoma, 2014).

The principles of its particular didactics are of great benefit to the entire educational system. It is a completely different kind of didactics for its mix of practicality, logical consistency, verifiability and falsifiability. Physical education is a language, consequently it has:

- a semantic dimension, comprised of all the factors of the motion;
- a syntactic dimension, formed by all the factors of the motion;
- a logical dimension, consisting in the hierarchical arrangement of the motion.

The motor language and its codes can be increasingly expanded and developed. This is exactly how motor language education, that is the education of the movement, is fulfilled (Sotgiu, 1989). In turn, this can also be used to improve and expand other kinds of languages, so educating through the movement.

Movement is one of the key features of physical education in schools. Less clear, though, is the purpose of moving and whether or not teachers are actually supposed to help students develop their movement capabilities. According to Kirk (2010), a crisis occurred in physical education during the 1980s, arguably as a long-term consequence of gymnastics being discarded in favour of sport techniques and fitness activities a few decades earlier. Within this context, the students' capabilities to move are mainly conceptualised in terms of 'skill'. Skill is, however, not a clear or straightforward concept. Sometimes it is used in an instrumental and decontextualised way, for instance, in relation to sports

(e.g. talent development; see Bailey, Morley, and Dismore 2009) or in terms of motor skills that facilitate academic achievements more broadly (see Ericsson and Cederberg, 2015).

In this way, skills are related to what Arnold (1991) calls 'schooling objectives' which are "concerned with using physical education (and the activities that comprise it) for purposes that may be desirable but that are extrinsic to it". To Arnold, physical education, just as any other subject, has to be justified through its educational objectives, i.e. 'objectives arising from the inherent makeup of the subject matter'. However, question remains of how knowing movements might be educationally valuable.

The motor educational action should be carried out through differentiated procedures and methodologies, both general and specific, aimed at fostering the basic education of all students in every sport. The main goal of physical education is to develop at its best every aspect of the personality defined as a highly complex theoretical construct, which reacts to both its own and exteroceptive stimuli and that takes shape thanks to the continuous interaction between the biological endowment and its environment (Meinel, 1984; Rikard, 2006).

The definition and the solution of the methodological problem is a doctrine that can lead the research on the scientific basis of movement education, so as to better understand its anatomical-physiological and psychological-pedagogical and to abandon any form of empiricism.

Hence, it is not just a matter of renewing methods in accordance with the times nor of adapting the teaching to the latest conceptions of men's bio-psycho-pedagogical aspects, to achieve an appropriate didactics (Casolo, 2002).

Within physical education, movement is often related to schooling objectives, such as fighting the obesity epidemic or developing sports proficiency, and not to educational objectives (for an overview, see Nyberg and Larsson 2014). Still, learning takes place regardless of whether it is deliberate or not (Quennerstedt, 2013), and since sports are taught in schools, students will, intentionally or not, have to negotiate standards of excellence of different sports, according to which they will also be assessed (Redelius, Fagrell, and Larsson, 2009) Arnold highlighted the need to formulate educational goals for physical education more than 20 years ago, but the tension between educational and schooling values, and the influence of sports are still quite a target for problematisation (Brown, 2013).

It is possible to observe an attempt of technical review to give the movement a new dynamic, aesthetic expression but this is still far from a new methodological approach, since it is again linked to traditional physical education without taking into account the motivational aspects. It comprises floor routines, with small and large equipment, short distance and fast running,

gymnastics and sports games, instead of tackling showing physiological and psychological, pedagogical motivations, by explaining the main goals of movement education which fall within those of general education (Gamelli, 2004). A methodological discourse must begin with these principles, and with the objectives that it is meant to achieve through movement, subordinating the choice of the most appropriate means to achieve it.

The movement, just like general education, is a means to permit students to realize people's real needs and demands, in order to avoid being swept away by nowadays living conditions, which oppress, determine and condition them (Cereda, 2013).

For this reason, any method, to be valid, must meet the human needs within a specific time and context, in order to understand, satisfy, correct and address all the individuals. It is therefore possible to say that the aim of physical education is not so much to get health, strength, speed, power, etc., for their own sake, but the sense of balance and well-being that comes from them.

Physical and Sport Education

Physical and sport education can coexist when one understands the features they have in common, thus making them work using the same principles and methods. If the first does not want to be considered a sport, it should at least recognize the main concept of sports: the workout. There are no differences in their bio-psychological purposes, but only a differentiation in degree and techniques (Cilia, 1996). Physical education is not the expression of a gym exercise that prepares to a sport or an activity complementary to the sport itself. The movement activity should be the logical continuation of the sport, both for the usefulness and the greater completeness of the sport movement, both for the interest it arouses in young people. Any movement should have a purpose of transferring outside the gym or the purely school environment, according to the natural or sport activities performed outdoors (Faigenbaum, 2007).

Physical education will lose its meaning if it is not supported by methodologies and didactics which can introduce people to it and, for the most talented people, to actual sports.

So, to make it happen, it is necessary that the methodology of physical education does not consider only the bio-psychological aspects of the person, but covers also the living conditions of the person, his/her needs and trends, to offer the most suitable solution for him/her. Therefore, we must propose recreational, emulative, moral, aesthetic motivations, in order to fight the damages of a sedentary lifestyle and lack of movement (Lloyd, 2014).

Physical Education in the regulatory landscape of the Italian school

Nowadays the reform process of the education and training system in Italian schools has gradually involved physical education too, focusing primarily on the teaching and educational aspects in all types of schools, particularly in the kindergartens and primary schools.

In 1900, the international conference in Paris marked the beginning of a symbolic step for the study of the body and the movement in Italy, which was one of the first countries to respond to this commitment by appointing a study commission in 1902, chaired by Angelo Mosso, to outline a great reform that, in 1909, by the Law no. 805, called “Law Rava-Daneo-Credaro”, made physical education mandatory both in public and private schools (Sibilio, 2002).

Subsequently, motor sports activities in schools have always been, from time to time, the transposition of the educational model of values prevailing in the Italian society, expressing each time a paramilitary, training, symbolic, democratic dimension.

In 1985, the Decree of the President of the Republic no. 104 of 12 February 1985 was the first methodological-teaching change, as a result of a progressive development of the research in the psycho-pedagogical and scientific field. It introduced important innovations within movement education, which broke off from moral and civil education, to become an independent subject.

The *Programs of 1985* gave a new sense to the concept of corporeality, which “is manifested, in both personal and social field, as a need and a growing demand for physical activity and sport”⁴.

After these programs, known as *New Programs*, there have been numerous significant legislative acts, aimed at the enhancement of the recreational-motor activities and sports at every level of school, such as the D.M. of 3 June 1991 on the “**Guidelines of the Educational Activities in the State Nursery schools**”. It establishes new guidelines for the organization of the didactics of motor activities by providing precise curricular indications which consider “**the body and the movement**” as fields of experience⁵, which are the different environments where the child does and acts, that is, the specific areas in which the child gives meaning to his/her multiple activities, develops his/her learning, acquires linguistic and procedural instruments, and pursues his educational goals, performing a concrete

⁴ Presidential Decree, no. 104, 12 February 1985.

⁵ Therein.

experience that takes place within defined boundaries and with his/her constant and active involvement⁶.

As a result of this new view, which aims at developing the indivisible unity of mind and body, physical education gives way to a specific field of experience “**the body and the movement**” that through physicality and movement “helps the growth and the overall maturity of the child by promoting the awareness of the value of one’s own body, considered as a means to express one’s personality and functional, relational, cognitive, communicative and practical condition of development in terms of education”⁷.

The Legislative Decree no. 59 of 19 February 2004, containing the National Guidelines for the Personalized Study Plans in Primary School, declared the main levels of performance which all the primary schools of the National Education System must achieve to ensure a personal, social and civic education and an education of quality.

Therefore, the school sets out to be the place where to entrench the knowledge (to know) about experiences (doing and acting), stressing the need for “enhancing the experience of the child with his intuitive, partial and general conceptualizations and who is aware that any symbolic dimension that animates the boy and his family and social relations is inseparable from his corporeality. In fact, the person is a whole, and the body is not the “dress” of each individual, but rather it is his overall way of being in the world and acting in the society. So the strengthening of the bodily expression is both condition and result of the strengthening of all the other dimensions of the person: the rational, aesthetic, social, operational, affective, moral and spiritual religious ones” (Palumbo, 2015).

The **Recommendations for the implementation of the National Guidelines**⁸ explicitly underlined the importance of the cognitive and communicative level of the body and of the motor skills, since “the motor dimension is the substrate on which are based all the cognitive processes” (Sibilio, 2008).

The regulatory framework further evolved in 2007 with the **National Guidelines for the Curriculum of 31 July 2007**⁹, which introduced significant innovations in the educational-motor and sports sector both in the kindergartens and primary schools, becoming a milestone for the recognition of the formative-educational importance of sport activities.

⁶ Ibidem.

⁷ Ibidem.

⁸ Recommendations for the implementation of the National Guidelines for Personalized Plans of the Educational Activities in nursery schools (2004).

⁹ D.M. 31 July 2007 – The new Guidelines for the curriculum in kindergarten and the first cycle of education.

The **Guidelines for the Curriculum “*The body in motion*”**¹⁰ represent the operating and educational context within which the didactics is summed up, it develops symbolic systems and conceptual frameworks. The child, through the movement, builds and shares new bodily-kinesthetic relationships with the others, through a seamless integration among experiences that actively follow and build the processes of learning through doing and acting. A motion which is shown, through the body and the movement, in a psychomotor and socio-motor key, and which aims, on one hand, at the development of sensory-perceptual skills and basic motor patterns, and, on the other, at the progressive acquisition and mastery of essential movements to interact with the environment.

The body dimension proposed in this programmatic document summarizes the singularity of the movement in the kindergarten, aimed at the consciousness of the value of the body as a contribution to the development of a positive image of the self.

The body dimension is identified as a privileged means of interaction and communication, as any proposed perceptual education will represent, first of all, a space in the global motor activity and segment it, showing itself as cognitive learning constantly followed by a bodily experience.

Finally, it is to educate the movement through suitable and appropriate educational experiences in order to promote its integration, its rationalization and its internalization aimed at the harmonic building of the personality of the child, contributing to the integral formation of the person.

In the section **Body, movement, sports**, of these Guidelines, there is a reference to the body-motor dimension and the motor experience connotation meant as “positive experience”, and which emphasizes the student’s capacity of doing, by making him a leading actor who is progressively aware of the motor skills he/she has gradually acquired.

It also underlines the need “to practice the motor experience as an activity that does not discriminate, does not bore, does not select and allows all the students to participate as much as possible respecting the individual differences. Through the body-motor dimension the student expresses his communicative demands and, sometimes, he manifests the various kinds of discomfort that he cannot verbally communicate (Palumbo, 2015).

The next ministerial proposal, the **National Guidelines for the curriculum in the kindergarten and the first cycle of education** of September the 4, 2012, matches the guidelines of 2004 and those of 2007 and retrieves the terms of Motor and Sports Science and Physical Education, meant as an autonomous discipline that “contributes to the formation of the personality of the students

¹⁰ Therein.

through the knowledge and the awareness of their own physical identity, as well as the ongoing need for constant movement as personal care and well-being”¹¹.

The teaching of ludic-motor and sport activities in the Italian school

Whatever may be the purpose and the orientation of a lesson, regardless of its main educational, rhythmic, sport, recreational characteristics, it should remain linked to the general principles that determine the character of motor education (Calidoni, 2000; Sibilio, 2015b). This means that the educational aim is always the most important element and that any other factor must be considered as a means. Therefore, the acquisition of the correct technical movement cannot be the aim of the lesson. It should be understood as a part of the general motor education to teach, the component of a whole which is to be inserted, connected to what has already been acquired during the lesson and according to what will be done later on.

If motor educational activities were restricted only to the physical sphere they would be reduced to a simple transposition of lines of thought or to didactic solutions or to a pure kinesiological assessment of the movement (Cereda, 2015).

Motor educational activities are a discipline aimed at the education of the individual as body and mind in a global vision. In this sense, Educational Gymnastics (movement, play, sport education) and sports require a total commitment of the self, a cooperation between the physical and mental faculties, aspiring to a perfect harmonic synthesis (Cilia, 1996).

One's body is the physical condition of the self and if one takes good care of it through a systematic education one's personality can also be educated. The evolutionary process from birth to death will be facilitated through continuous mutations. The systematic education of the self, the mind-body problem, is not limited to physiology, to sport, but it involves the psychological, sociological, pedagogical fields and offers to the educational gymnastics a broader humanistic context (Cereda, 2015).

Body language reflects a person as well as a language reflects a culture; as well as in a language lie different cultural, biological, social experiences of a group of people, for the individual, his/her body contains all his/her personal history, that is the subjective experiences and relationships with their related meanings. His/her subjectivity is embodied although in a way that is unknown to him or her (Biccardi, 2001).

¹¹ Ibid. Therein.

In this view, only by recognizing a genuine awareness in the body Language, it is possible to build an educational model able to contribute to the integral formation of the human person, the didactics of body and movement within the school, indeed, identifies in the corporeality and in the movement the basis of a process that induces awareness starting from sensoriality.

In nursery schools, for example, the field of experience “**body and movement**” states that children become aware of their own body by using it since birth as an instrument of knowledge of self in the world... because movement is the first learning factor of a child and it is through movement that the child seeks, discovers, plays, jumps and runs, and the action of the body produces emotions and pleasant feelings of relaxation and tension¹².

Therefore, it becomes essential in teaching to solicit the expressive and communicative potential of the body to come to refine the perceptual skills and the knowledge of objects, the ability to orient oneself in the space, to move and to communicate according to our imagination and creativity.

All motor and sport activities planned in the curriculum of Physical Education contribute to the promotion of cognitive, social, cultural and affective experiences, and the conquest of motor skills, as well as the possibility to experience the success of our actions, is a source of gratification that encourage the self-esteem of the pupil and the gradual expansion of his experience, enriching it with new stimuli.

It is possible to deduce, therefore, three main aspects, namely:

- the enhancement of the educational role of the discipline not only from the disciplinary point of view, but also from a trans-disciplinary perspective;
- the enhancement of the educational role of the discipline as a privileged instrument in the process of identity development of the subject;
- the enhancement of the educational value in the broad sense of discipline that contributes to the maintenance of health and the overall well-being of tomorrow's citizens, through the adoption of a behavioural habitus.

It is possible to read, in fact, in the National Guidelines of the Italian Ministry of Education that motor and sport activities, especially when they help to experience victory or defeat, contribute to the learning of the ability to modulate and control emotions and they are key factors for an integrated educational action, for the formation of future citizens of the world, respectful of human, civil and environmental values.

In the National Guidelines, there is also a strong connection between movement education and lifestyles, in fact, the document recalls the need for the education to movement to provide experiences aimed at strengthening healthy lifestyles, as a basis of personal culture. This last one enhances the motor and

¹² Ivi.

sport experiences, also outside school, such as prevention of hypokinesia, overweight and poor eating habits, motor skills' involution, early dropouts from sports and use of addictive substances.

This is, therefore, a new perspective of Physical Education, conceived as a modern discipline, articulated and rich, involving all the human dimensions of education, and that goes beyond the development of motor skills in order to reach a wider development of life skills.

In summary, we can say that Physical Education cannot be considered as the discipline of "doing just for the sake of it" which simply stimulates motor and sport activity, but as a privileged field for the formation of the person that finds its roots in the education *of* and *through* the movement, within the perspective of KNOWING, KNOWING TO BE, KNOWING HOW TO DO.

Technologies for the educational motor intervention

In order to program a proper educational intervention, the motor educator should establish exactly the objectives to be achieved; should formulate a set of hypotheses on the ways to achieve such objectives; should choose the most valid educational assumption in relation to the means, to the methods, to the materials and to the initial training conditions of students (Cilia, 1996).

The lesson is the basic organizational unit of teaching, where the content is determined by the objectives set by the annual programming.

The one-hour lesson is divided into three phases:

- an initial preparatory or introductory part;
- a main part;
- a closing or final part.

The purpose of the introductory phase is to prepare students from a psychological and physiological point of view to perform the activities included in the lesson.

In the preparatory phase, it is necessary to address the following physical and psychological objectives:

- to decrease the muscular tension;
- to encourage a suitable joint mobility;
- to prepare the cardiovascular, respiratory and metabolic systems to the following effort;
- to elevate body temperature;
- to achieve a better capacity of reaction;
- to stimulate an optimal excitation of the nervous system, concentration and endurance;
- to activate the motivational mechanisms.

In the preparatory phase, it is necessary to distinguish a general preparation and a specific preparation. The general one normally precedes the specific one and it consists of various kinds of pleasant exercises. They include, for example, motor exercises for articular mobility and balance. Games with small tools and balloons can be included. The chosen exercises should be simple and already known to the students, so as to avoid breaks due to the need of explanations (Calvesi and Tonetti, 1992). The intensity of the exercises should be increased gradually.

The specific part includes exercises that prepare immediately to the tasks of the main part. Thus, for example, if the theme of the lesson is the teaching of the high-jumping technique, and the related development of the strength and speed, it is appropriate to carry out, within the specific part, some running exercises, jumping exercises and so on.

If the duration of the preparatory phase is short, it is appropriate only to perform the exercises that are used for the first of the various tasks of the main part.

If the duration is longer, it is possible to use both general and special exercises.

The use of games or exercises such as relay is recommended to create a favorable psychological climate especially from the motivational point of view. However, the time devoted to them must be limited in order to avoid unnecessary strain and premature fatigue (Mitchell and Fiset, 2016).

The main part of the session is devoted to the tasks that make up the lesson objective. For example, learning a technique and improving strength or speed.

It is appropriate to limit the number of tasks in order to achieve an adequate internal and external load (Faigenbaum, 2009).

Given the special role of resistance in physical education, there should always be a part devoted to it. But it is important to remember that if the majority of the tasks of the main part aim to the development of endurance, through running exercises, sport games, small games with many repetitions, at the end of the main part it is necessary to perform exercises that promote recovery (Cilia, 1996; Mitchell and Fiset, 2016).

In the sequence of the tasks in this part, certain principles must be followed: first, the learning and perfecting of new techniques must be included at the beginning, because this activity requires high concentration, which is possible only if the central nervous system is not fatigued and engaged by a suitably intense motivation. A positive development of new movement patterns is obtained then only if the nervous system is stimulated in an optimal way and this happens at the end of the preparatory phase (Meinel, 1984; Casolo, 2002).

Speed and rapid strength exercises must be performed in the first phase of the main part. In fact, they are effective only if the body is fatigued and its

functions are in a state of maximum efficiency. Shooting exercises performed after a high effort do not improve the quality of the sprint. The main part can end with resistance and strength exercises.

In the closing phase, the recovery process takes place. At this stage the organism should be returned to its normal functional state by decreasing the intensity and changing the loading means.

If the main part had a sufficient and effective load, without the resistance component, the resistance should be exercised in the concluding part. The tasks of this phase are aimed at achieving the cool-down.

If the main part was dedicated to resistance loads, it is possible to avoid the final phase of the lesson. To encourage the participation of students in the teaching activity, it should be remembered that is good from the start of the lesson to explain the purpose, the tasks and to indicate the elements of particular difficulty. After the closing phase, a brief recapitulation and an assessment of what has been done are useful as they are essential to maintain motivation and ensure that students participate in the educational process, acquiring theoretical notions that are the basis for their growing independence and disposition to physical activity (Clavesi and Tonetti, 1992; Carraro and Bertollo, 2005; Faigenbaum, 2009; Mitchell and Fisette, 2016).

The development and consolidation of the coordination skills

Coordination skills in children and teens are aspects that can be trained and can contribute to the rapid and proper solution of motor tasks in physical education, in sport and in other areas of life. The general coordination skills are reflected in different ways in the special skills. As special coordination skills, in the concrete conditions of an exercise, always occur in the form of a complex system, also their training may take place in a complex form. They are closely connected to the conditional capacities (Casolo, 2002; Casolo, 2011).

Coordination skills are developed only if practice exercises and sport movements are related to the needs of the children's sensory-motor system and control. So it is necessary that:

- they perform certain actions (exercises);
- the degree of stimulation of the levels of these exercises grow continuously (increase of the difficulty, complexity of the tasks, greater accuracy, etc.) (Casolo, 2011).

It can be said that in youth sports and in school physical education, the learning of many different motor processes and the differentiated use of the exercises are the basic means for the development of coordination skills. In this

case motor learning has a significant influence on the adaptive function of the entire motor system (Rikard and Banville, 2006).

As for the means, it is good to make some clarifications. General exercises for the development of student's motor experience include:

- slow and fast march;
- slow and fast run;
- running with small hops, with or without the movement of the arms;
- various types of arm circles, from a standing or walking position;
- single and double-leg hops;
- hops with a rotation of the body from one side to the other;
- rolling and climbing.

These are simple exercises but they must be repeated often by children between 6 and 10 years of age. They can also be invented by the teacher and proposed alternately (Mitchell and Fisette, 2016).

Basic coordination exercises are:

- balance exercises on narrow surfaces when stationary and in motion, which may initially be carried out with the assistance of another pupil;
- rapid rotations in the transverse and longitudinal plane in stationary exercises;
- rapid changes of direction in the quick run;
- change of the movements to a signal or a command;
- precision exercises (control of some parts of the body, target-throwing and precision hops, blindfolded exercises);
- exercises with musical accompaniment (rhythm and melody) and dance exercises (which must include both girls and boys).

Through the activities of school sports, students increase their motor coordination. The following are recommended:

- sport games;
- combat sports (wrestling, judo or individual exercises of these sports);
- gymnastics;
- rhythmic gymnastics.

As for the special preparatory and standard exercises, reference is made especially to those methods that are used to illustrate and to introduce new motor patterns (Sotgiu and Pellegrini, 1989; Mitchell and Fisette, 2016).

The training of the conditional capacities

It is evident that a methodological study cannot be reduced only to structural and coordination factors. It should not ignore the means to establish the individual's ability to produce a greater amount of movement.

The specific exercise, aimed at an organic strengthening, is the one produced by training, that is, by the systematic, gradual and controlled repetition of the various forms of movement. In the pre-adolescent phase, the training concept should be introduced more as a knowing term than as a didactic element. The student has to assimilate the training concept and the teacher should introduce it as a guiding idea of the lesson, without explaining its purposes and techniques, given the age of the pupils.

Conditional capacities, defined as the set of motor characteristics purely linked to an organic substrate, are located within the neuro-sensory-motor system, in the operating structure represented by muscle tissue, which allows the execution of the movement (Cereda, 2013; Lloyd, 2014). Traditionally, the conditional capacities include speed, strength, resistance, while the presence in this group of joint mobility is not accepted by all authors. For a long time, perhaps due to the possibility to specialize prematurely, the problems connected with the conditional capacities have been avoided in the activity of young people. Actually, they form an integral part of everybody's fundamental motor set and it is therefore fully justified to include them in a correct physical activity program, suitably choosing the right time and approach. Their development is closely linked to the anatomical and functional maturation of the various organs and systems, and in accordance with the specific characteristics of the developmental age (Faigenbaum, 2009; Lloyd, 2014).

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