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INCLUSIVE TEACHING STRATEGIES IN PRIMARY SCHOOL

STRATEGIE DIDATTICHE INCLUSIVE NELLA SCUOLA PRIMARIA

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Abstract

The school was created to train people in sociability, autonomy and relationship. Through physical activity and sport the person grows physically, behaviorally and relationally. At school it often happens that the sports motor activity - both the one carried out in the gym during the dedicated hours, and the one proposed during the break and in open spaces - is experienced as a moment of discomfort and exclusion for children with motor, cognitive or sensory disabilities. As well as from the lack of specific inclusive regulations applied at all levels of education and the lack of adequate space and equipment. The obstacles derive not only from the pathological conditions of the children but also from the poor preparation of the teachers who teach Physical Education in Primary School, and often do not possess the appropriate qualification to teach the discipline. A further obstacle is represented by families who exempt their children from sport activities for fear of possible accidents.

La scuola nasce per formare le persone alla socialità, all'autonomia e alla relazione. Attraverso l'attività fisica e lo sport la persona cresce a livello fisico, comportamentale e relazionale. A scuola avviene spesso che l'attività motoria sportiva, sia quella svolta in palestra nelle ore dedicate, sia quella proposta durante l'intervallo ed in spazi aperti, venga vissuta come momento di disagio ed esclusione per bambini con disabilità motorie, cognitive o sensoriali. Gli ostacoli non derivano soltanto dalle condizioni patologiche dei bambini ma anche dalla scarsa preparazione dei docenti ai quali è assegnata la cattedra di Educazione fisica nella scuola primaria, docenti che spesso non posseggono il titolo adeguato all'insegnamento della disciplina. Un ulteriore ostacolo è rappresentato dalle famiglie che esonerano i propri bambini dalle attività per timore di eventuali infortuni, nonché dalla mancanza di normative specifiche inclusive applicate a tutti i livelli di istruzione e dalla carenza di spazi e attrezzature adeguate.

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Keywords

School, Integration, strategies

Scuola, Integrazione, Strategie

Introduction

Starting from the examination of a particular pathology, we will present the characteristics, the daily difficulties but also the possible practical activities to be planned for the school. This type of study analyzes infantile cerebral palsy, that is, damage to the central nervous system that affects the overall motor function and general development of the child. The expression infantile cerebral palsy or PCI defines a persistent but not immutable disorder of the development of posture and movement, due to alterations in brain function, for pre-, peri- or postnatal causes, before its growth is complete. In Italy - as in other developed and industrialized countries - the incidence of PCI has long been around 2 per thousand (new case per 5,000 births). The problems related to the pathology are: abnormal muscle tone and therefore hypertone, dystonia and hypotone; selective motor control deficit, coordination and balance deficit, muscle weakness, sensory problems. Paralysis can be unilateral or bilateral, so they are called tetraparesis if the four limbs are involved, one diparesis if the lower extremities are affected, and hemiparesis with only one affected side. The Gross Motor Function Classification System (GMFCS) is used for the classification of the various levels. Children with hemiplegia use various types of orthoses to allow normal muscle growth.

1. Motion control

The analysis of human movement, in its physiological and pathological aspects, became a scientific topic with the advent of technical means to measure and capture motor sequences, with the experiences of Marey and Muybridge. Human movements are the object of everyday experience, it is paradoxically a negative element because it creates the wrong expectation that a complete knowledge can be achieved simply by following the development of measurement techniques. This is not the case, and every experiment is the source more of questions than answers and therefore the attempt to capture the complexity of targeted actions and adaptive behavior. The traditional scheme is based on a separation of perception, movement and cognition and on the segregation of perceptual, motor and cognitive processes in different parts of the brain, according to a hierarchical organization. This scheme has its roots in the empirical

knowledge of 19th century neurologists, such as J Hughlings Jackson, and a surprising degree of analogy with the basic structure of a modern computer, consisting of input and output peripherals connected to a central computer. This point of view is outdated. According to a theory of spatial perception formulated by the Anglican bishop Berkeley at the beginning of the eighteenth century, perception is the product of sensory stimulation transformed into organized experience, thus depth cannot be perceived visually because of the retinal and two-dimensional image; Berkley, in fact argued that the ability to have visual experiences of depth is not innate but can only derive from empirical learning through other senses. Only the second part of this theory agrees with Piaget's modern approach to neuropsychological development and, with the connectionist theories, developed in the 1980s as an alternative to classical artificial intelligence. Even Berthoz, with his motor theories of perception, is based on the concept that perception is not a passive mechanism for receiving and interpreting sensory data, but an active process of anticipation of the sensory consequences of an action and therefore a coherent link between sensory and motor patterns. Another school of thought is the Russian one including Pavlov studies of the nature of reflexes later revised by Anhokin and Bernstein. In particular, we owe to Bernstein The seminal observation, according to which motor controls alone are insufficient to determine movement but identify only a few factors in a more complex equation Where ~~is~~ the dynamics of the environment has a decisive influence. This led to the identification of muscle stiffness as a motor parameter of great importance and the formulation of the theory of motor control, based on the equilibrium point of Feldman and Levin in 1995 and Bizzi in 1992. Stiffness, or elastic coefficient, is the slope of the length force curve; in the common springs this coefficient is constant while in the muscles it grows with the increase in strength since the force curves of the length in the muscles have an approximately exponential trend. According to the equilibrium point theory, posture is not the result of an active control process but the passive consequence of the mutual cancellation of the elastic forces of the agonist and antagonist muscles in a situation of minimal potential energy. Even movement, according to this theory, is the passive consequence of a gradual displacement of the set of elastic muscle forces. In general, we can say that, in different ways, the Piaget circular reaction and the Bernstein comparator model are different ways of expressing the ecological nature of motor control, that is, the synergistic interaction between brain processes, including muscle activations, and the dynamics of the environment.

2. The role of motor education

How can we behave when among our students we have a child with disabilities and in particular with hemiplegia? Certainly not by excluding them from practice!

The fundamental role of physical education for the promotion and maintenance of the state of health is widely recognized, the contexts of intervention can be as diverse as schools, sports initiation bodies, sports clubs, public health, leisure associations. The World Health Organization recommends, in its guidelines, the practice of 60 minutes of moderate to intense physical activity per day, for children and adolescents (5-17 years) (WHO, 2020), with an energy expenditure of 3 to 9 MET (Metabolic equivalent Task) (Norton & Sandgrove, 2020). The benefits and improvements are generally available throughout the body since it acts on different systems such as circulatory, respiratory, immune and also positively on various metabolic, bone, joint diseases and, last but not least, physical activity has the ability to improve self-esteem, mood and self-acceptance. The context in which physical education is most used, to transmit motor skills, knowledge, good habits and healthy lifestyles, is precisely the school context. Not always in Italian schools there is the availability of specialized personnel, who would be able to transmit knowledge, techniques, teaching of sport in a pedagogically correct way, involving all students in a stimulating way. The objectives of the motor education lesson for children with hemiplegia are the same as those of able-bodied children with the same purposes: spatio-temporal perception, expressiveness, orientation and lateralization, exploration of the environment and search for new solutions to develop logic; perceptual discrimination, evolution of basic motor models, improvement of conditional and coordination skills. We organize the lesson with motor start, mild activity followed by games with physical and cognitive commitment. Every child's play is characterized by a motor commitment that sometimes appears limited, but which is often so evident as to suggest that movement is the most important aspect of the game. In fact, the child is engaged in it with all his personality. Acquiring motor skills and personal autonomy, knowledge of the environment, is rewarding for pupils and teachers. Teachers' proposals must represent a source of security and encouragement since playful activities are the main tool through which children could express their identity and develop increasingly complex knowledge. We believe that children's play activities are serious and demanding activities just like a working adult, it is therefore the duty of the teacher to know how to manage the various aspects: cognitive, emotional, social. The game favors active relationships both on a cognitive and relational level, it gives the possibility

of being oneself, showing oneself to others in a multiplicity of aspects and functions deriving from the stimuli of adults. In the new guidelines, the motor activity of pupils is outlined as a space-time in which children coordinated by the teacher make cognitive results, live positive situations, achieve growth goals, gain greater confidence.

3. The teacher of motor sciences and learning objectives

Physical Education teachers must not only know how to practice and organize movement activities, but must possess the necessary skills to promote a healthy lifestyle, motivate students to practice physical exercise and involve them in different sports. The teacher who works in the motor field incessantly stimulates students to active and responsible engagement to promote their learning.

In the Italian Primary School the teaching of Physical Education is entrusted to general teachers or specialists or both based on the autonomy and availability of the school staff. Teachers must transmit to students all their technical, didactic and sports knowledge in a stimulating and pedagogically correct way, taking into account both predisposed and motivated students, and those who are clumsy and have poor interest in movement. Their main tasks can be defined as follows:

- educate, through movement, to develop all the main psycho-physical components of the person (emotional-affective, relational-social, creative-expressive, cognitive, etc.);
- propose exercises that tend to the general improvement of physical condition factors and coordination skills;
- plan and prepare lessons according to the improvement goals and according to the age and level of the students themselves.

The professional profile of the motor education teacher can be divided into four main areas:

- ✓ disciplinary skills
- ✓ relational and communication skills
- ✓ organizational skills
- ✓ teaching skills.

It is very important to know how to create a serene class atmosphere but above all collaboration and sharing. Collaboration with comrades is the foundation of living in society. In Primary School the use of the body is of extraordinary importance for the growth of the child, not only

in terms of general health in a bio-psycho-social model but also for cultural, emotional, relational enrichment and development of knowledge towards diverse horizons. In particular, what is acquired "on" the body and "through" the body has a very incisive identity connotation for the balance and personality of the student. The watchword for children is *to have fun*. Fun is a means to solicit potential or residual skills but also a symptom of a certain degree of motivation, which must be intrinsic and not only recalled by the teacher or classmates.

The teacher plans the activities considering:

1) the same purposes of the objectives of the motor education lesson both for children with hemiplegia and for able-bodied children;

2) spatial-temporal perception, expressiveness, orientation and lateralization, exploration of the environment and the search for new solutions to develop logic, as happens during the learning of other school disciplines (as well as perceptual discrimination, the evolution of basic motor models and the improvement of conditional and coordination skills);

3) the National Indications for the school of the first cycle.

According to the above indications, in the first two years of Primary School, a predominantly playful method is used to achieve general and specific objectives.

The general objectives to be set are as follows:

• education in sociality and knowledge of primary emotions;

• education of postural patterns and basic motor patterns;

• development of motor skills (conditional and coordinative) and expressive;

The specific objectives to be set are as follows:

• refinement of sensory-perceptual channels (sight, touch, hearing, kinesthetic canal);

• consolidation of laterality and a first awareness of self-image;

• development of general dynamic coordination, in particular spatial-temporal;

The general objectives of the second three-year period of Primary Schools (3rd - 4th - 5th year) are a continuation of the work carried out in the two-year period and are identifiable with:

• development and improvement of sensory-perceptual abilities;

• consolidation of motor and postural patterns;

• development of motor skills and abilities;

• knowledge and introduction to sports games and games;

• improvement of communication skills: verbal and non-verbal;

Instead, the specific objectives to be achieved are:

• to know and master your body in space and time;
• to know the tools with which you play;
• to know some basic rules of the main sports games and popular games;
• to know what are the appropriate behaviors for their own well-being and that of others;
• activities in a natural and pre-sports environment.

The physical education lesson is fundamental for the development of the child; the importance of movement, play and game-sport in the process of growth have an extraordinary value. Primary School must ensure that during the P.E. lesson all children are included and that everyone is guaranteed the right to education through movement. In the P.E. lesson, the specific objectives for children with cerebral palsy outcomes are educational and disciplinary, with a view to inclusive, collaborative and fun.

The activity includes three phases:

- motor starting (games are held, small exercises with increasing commitment in preparation for the next phase)
- mild activity more and more intense (central phase that involves the development of the main themes, with the use of most of the lesson time. It is the most challenging part both cognitively and physically)
- approach to subsequent content (Cool-down: final phase of return to a situation of greater calm. Usually small slow or relaxing exercises are performed, and then move on to the comparison with children)

What is to do in the presence of a disability?

In the case of a hemiplegic child it is appropriate:

1. to Develop the ability to balance in all its forms: statically and in motion to teach how to recover the support base in various situations and manage any falls.
2. To Stimulate strength, if lacking, but avoid the stresses of the stretching reflex.
3. To Teach the modalities of relaxation and muscle stretching.
4. To Stimulate personal autonomy, but above all resume all the basic motor patterns and combine them in the practice of motor and sports activities where the child finds fun and gratification.

To design the lesson, it is necessary to start from the exploratory phase, that is observe and study your students. Then explain, in a very simple way, the delivery, followed by a practical example.

4.Activities to propose

At this stage, the teacher chooses to offer individualized or personalized lessons. The individualized lesson includes individual activities presented to the students of the entire class during the school year. This is used to start to improve certain skills or to consolidate specific skills. The personalized lesson is, instead, a didactic strategy that aims at enhancing the skills of individual students, without providing for class objectives, so that everyone can achieve a personal goal, based on their potential. The best solution is the synergy between individualized and personalized teaching, which is able to determine, for each student, the optimal conditions for achieving the objectives. The preparation of materials, spaces and tools must be focused on needs, so that everyone can express themselves according to their own characteristics. Below, a series of activities in support of P.E. teachers is listed. The activities include exercises and games, more intense moments and others less demanding, relaxation.

Game 1

Play some music make the children walk slowly and pass by objects, then walk faster and walk in small steps, at first we walk with the largest possible steps, then we run.

Game 2

With background music, children run. When the music stops, they have to enter a circle or stop next to the cone, or put one foot inside the circle the other one outside. They can stand with one hand on the ground and two feet on the ground, one hand on the ground in front and one foot on the ground behind. Between one proposal and another, it is checked that everyone has found the circle, the cone; a break is made to allow the special child to rest.

Game 3

The teacher hands out the instruments (stick, circle, cone) for the gym, plays background music then makes the children walk quickly. When the music stops, they have to enter the instruments or stop near one of the objects without touching them. As a variant they can run and at the music stop, take one of the instruments and store it in a designated place.

Game 4

The teacher draws a strip on the ground with adhesive tape. The child, starting from the upright position, must place one foot forward and one backward, pick up one object at a time from the ground and deposit it on the strip firstly to the right, return to a vertical position and then bring them back to the left without losing balance. The child can repeat the exercise on one foot.

Game 5

Standing, bring the upper limbs stretched over the head, "touch the sky and then touch the ground", bending even slightly the lower limbs, then try to keep the lower limbs tense. In motion, pass two sticks placed longitudinally on the ground, run slalom passing externally to the cones and walk on some carpets. Blindfolded, children sitting in front of the teacher (who silently moves around the gym): indicate with his hand the direction from which the sound comes (which the teacher produces);

Slalom

start running and climbing inside the circles with one or two feet, pass between the sticks or two strips of adhesive tape, take one of the balls (or other objects) in the circle, touch the circle; In pairs: a child is blindfolded and a companion without a mask gives commands (raise the right upper limb upwards, raise the left leg, sit cross-legged ...) then change role;

Game 6

We organize some numbered containers for the gym, the pupils are placed scattered around the gym while balls or other materials are placed in the short sides of the gym: the teacher or the child referee on duty will start the music, the pupils stop, they will have to stop on one foot, the referee will say aloud "right or left and the number of the container" and the players will go to their right or left to retrieve the object for insertion in numbered containers. Some games are proposed in order to let the child with disabilities choose which role to choose (for example game leader or referee), thus becoming an integral part of the group game.

Game 7

All players move in scattered order around the field, when the Game Leader shouts a number, players must regroup until they build the number they heard. Players or groups that do not respect the number are eliminated, the last 2 remaining win.

Game 8

Two teams that have the same number of balls; at the beginning of the referee everyone throws the ball into the opponent's field, rolls it and tries to stop and postpone those who come from the opposite field. At the signal of the referee stop throwing. Points are calculated by adding the balls that lie on the ground of each team.

Game 9

Groups of 3 or 4 children have to create an imaginary machine, each player is an indispensable part or element of the machine... the machine can produce repeated movements.

Game 10

Alone or in small groups it is asked to reproduce with the body the letters, numbers, geometric shapes. The other groups will have to guess the form or word.

Results and Conclusions

The levels reached by the students already from the first trimester indicated a general improvement in the class and above all there were evaluations in which dispensative measures were previously indicated. The benefits obtained have been maintained over time, in particular the improvement of the school climate and the socialization of all. Teachers in the common area have acquired new methods of teaching the science of exercise to propose to their pupils. All pupils and not only those with disabilities have understood that mistakes are part of the "game", nobody has to be perfect.

For the evaluation, the student's starting point was taken into account, enhancing the growth path, avoiding the evaluation according to predefined standardized grids.

We found: improvement of the school climate, greater degree of integration of children who were previously on the sidelines, greater demand for help and therefore better relationship with the teaching staff. Therefore, the suggestion that comes from this work is certainly to encourage research on inclusive teaching with physical education and to implement teacher training, to include the specialized teacher in all orders and grades of school.

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