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Promote the learning of life skills in primary school through an innovative didactics' proposal of motor-sports education

Promuovere l'apprendimento delle life skills nella scuola primaria attraverso una proposta didattica innovativa di educazione motorio-sportiva

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Abstract

The research work aims to emphasize the importance of motor and sports education in the training of people, starting from primary school, through the acquisition of life skills. In this regard, this work proposes an experimental motor education program to be developed in just 20 hours in primary schools, with the aim of increasing the educational level of young students in five key thematic area useful for stimulating the learning of the main life skills. The research methodology is based on an empirical approach, in line with several studies in the pedagogical field, which allows to observe and evaluate in detail the progress made by the students from the motor, social-relational and educational point of view. The results are measured by creating an evaluation protocol that is applied both before and after the administration of the experimental project. The research carried out fulfills the initial research purpose and it is the basis for future studies in the field of educational sciences aimed at the growth of the individual through a suitable institutional and didactic restructuring of motor and sport education in the school system.

Keywords: Motor and Sports Education; Life Skills; Primary School; Experimental Didactics; Learning.

Sintesi

Il lavoro di ricerca ha lo scopo di sottolineare l'importanza dell'educazione motoria e sportiva nella formazione delle persone, a partire dalla scuola primaria, attraverso l'acquisizione delle life skills. A tal proposito, questo lavoro propone un programma sperimentale di educazione motoria da sviluppare in sole 20 ore nelle scuole primarie, con l'obiettivo di aumentare il livello di istruzione dei giovani studenti in cinque aree educative utili a stimolare l'apprendimento delle principali life skills. La metodologia di ricerca si basa su un approccio empirico e osservativo, in linea con i principali studi in ambito pedagogico, che permette di analizzare nel dettaglio i progressi compiuti dagli studenti dal punto di vista motorio, socio-relazionale ed educativo. I risultati vengono misurati attraverso la realizzazione di un protocollo di valutazione che viene applicato nella fase precedente e successiva alla somministrazione del progetto sperimentale. La ricerca soddisfa lo scopo di ricerca iniziale, ed è la base per futuri studi nel campo delle scienze della formazione volti alla crescita dell'individuo attraverso una adeguata ristrutturazione istituzionale e didattica dell'educazione motoria e sportiva nel sistema scolastico.

Parole chiave: educazione motoria e sportiva; life skills; scuola primaria; didattica sperimentale; apprendimento.

1. Introduction

Motor education is an indispensable tool for the individual's comprehensive development, capable of fostering the acquisition of motor and socio-relational skills. It improves the children's state of physical well-being, makes them disciplined and active, teaches them the meaning of teamwork and allows them testing their decision-making skills. It also teaches us how important it is to become active and to counteract the negative effects of a sedentary lifestyle. Motor education is particularly important during childhood, since it is the stage of growth in which the correct development of the individual can be influenced most (Casolo, 2019; Ceciliani, 2018; Fitzpatrick, 2022; Lipoma, 2014; O'Donnell, Sandford, & Parker, 2020). Motor activity and sport improve children's interpersonal skills: these skills are fundamental in work and in the relationship with others; it teaches how to communicate messages effectively and how to work together. Sports and motor activities have only recently been recognized as extraordinary social stage, privileged environments of human relationships, effective tools to fight against deviance phenomena, places capable of conveying values and rules through a stimulating, active and participatory way (Isidori, 2019; Sibilio, 2005; Wilson et al., 2022). Body and movement promote autonomy, and the acquisition of personal identity and motor skills in the child: the natural drive to act, typical of the period of childhood, must first of all be a sensory education; therefore, it must be addressed to teaching and learning paths that enhance the bodily dimension. In this regard, one of the most effective experimental expressions to develop what has been described is the laboratory activity, where situations are created from a practical point of view and everything is implemented through theory. This is important in pre-school and primary school, because it monitors the action and, by means of it, children internalize things; this triggers their attention thanks to the technique of the *learning-by-doing*. In the early twentieth century, Montessori already used this method and noted that the child's attention was greater in practical performance than in a face-to-face lesson (Gobbo, 2020; Lillard, 2013; Sani, Wardany, Herlina, & Vernanda, 2021). Through sports activity, children begin to communicate with others: they come out of the egocentric phase and begin to see and perceive the other, as well as themselves. This is favored by the partnership game because each child relates with the others, and therefore a stimulus to group cooperation develops. In this perspective, trust towards the educator is constructive because it subsequently turns into self-confidence; the rules and their observation are important too: this makes group harmony possible (in fact, not respecting the rules can harm both oneself and the others). A moral ethics of the individual is developed, which will influence the respect of the rules in the society in which he/she will live. Therefore, acquiring rules and moral principles is useful for socialization. This leads intuitively to deduce how much motor-sports teaching, especially in primary school, potentially represents one of the most effective tools to promote sustainable learning of life skills and therefore to support the educational construction of people (Colella, 2020).

1.1. Methodological approaches at the basis of an effective educational proposal for motor and sports sciences in primary school

Assuming the presence of a single *optimal* methodological approach in the didactic proposal of motor education in the context of primary school would mean not taking into account the different needs of children from the first to the fifth class; it is essential to strive for a virtuous path that, at the end of the fifth class, leads to a high percentage of students who are enthusiastic and motivated to the practice of motor education, and who have been able to cultivate and acquire, by means of it, those pedagogical and socio-relational values that are indispensable for their appropriate training (Callea, Spittle, O'Meara, & Casey,

2008; Gomez Paloma, Agrillo, & D'Anna, 2013; Morgan & Hansen, 2008; Sibilio & Aiello, 2011). It is necessary to identify some good practices that minimize communication incidents and negative experiences alienating children from this discipline. The methodological-didactic approach can only be differentiated with appropriate choices for lower age groups and for higher ones. The differences between students in the various primary school classes are considerable, and require reflection and wise choices to be adopted. In addition to the obvious differences in age, growth and development, different needs emerge in terms of recreational, motor, emotional and relational needs: first class students have many characteristics typical of pre-school grade ones, while fifth grade students begin to show typical characteristics of first grade secondary school students. The 1985 primary school didactic program introduced game-sports as a new element (Coco, 2014; Sgrò & Lipoma, 2019). The neologism is formed by two apparently conflicting terms:

- game, i.e. a free-expression and fun space that the child prefers par excellence;
- sport, which is often synonymous with performance, competition, selection.

As far as styles and methods are concerned, the motor development of the youngest students takes place in a global way; therefore, global situations and experiences will initially be preferred. For the learning methods typical of pre-school and early primary school students, it is advisable to use mainly inductive didactic methods, i.e. a learner-centered method in which the learner is free to act and explore, and therefore there is guided discovery and autonomous problem-solving: this is useful for the teacher in order to observe the students. Instead, the deductive method is more teacher-centered. The teacher has to be polyvalent, i.e. he/she has to use different styles and methodologies according to the didactic needs, the age of the students and the group, trying to enhance the potential of each method: there are no ideal styles and methods but choices suitable to achieve different goals. It is important to affirm the idea of a *deconstruction* of the recreational-motor activity: it is not practiced in the gym and with conventional tools, but it can be carried out in any space, in compliance with safety regulations and with many tools, even with the unconventional ones or those made of different materials (poor and recycled materials). Then there is the need to reproduce a fantastic setting, to recreate a playful-motor situation with an integrating background.

Then there is the drama-game technique in which to use characters, objects and context that create the magic of the game: this strategy could be used as a privileged form, at least until the age of sevent to eight, although afterwards it would be appropriate never to abandon it. Physical activity has countless positive effects. Scientific-pedagogical studies agree that practicing movement regularly generates numerous benefits. This is true for both adults and children. Physical activity, in fact, has positive consequences on children's growth and psycho-physical, educational and social development; it is potentially able to convey the acquisition of life skills useful to the individual in any socio-relational contest and at any age (Cronin et al, 2022; Danish, Fazio, Nellen, & Owens, 2002; Gould & Carson, 2008). It guarantees them a healthy and harmonious development, and it is also one of the main forms of well-being promotion for all age groups.

2. Experimental Pedagogical Project

The experimental didactic proposal was carried out in a primary school in the Municipality of Naples where two homogeneous classes were selected by level (second year), size (20

children) and gender distribution (eleven males and nine females). One class represented the *sample group* and carried out the experimental teaching activity for motor and sports sciences, while the other class continued with the traditional didactic approach (control group). The formative planning was developed in ten weeks with ten lessons of two hours each, without therefore increasing the current amount of hours dedicated to the school discipline of motor and sports sciences in primary school. Thematic nuclei have been identified as pillars on which both the path of the didactic activities and the evaluation scheme. The evaluation scheme was based on the classic design of ministerial school evaluation forms, where the skills that students should acquire and the related learning objectives to be pursued for this to happen are specified for each thematic nucleus; then an evaluation descriptor is defined with a series of qualitative parameters correlated to it and, finally, a numerical value corresponds to each qualitative parameter: the grade. The numerical expression of the grade is therefore the summary that expresses how much a student, following an educational path, has learned certain learning objectives and developed specific skills in relation to a specific thematic core. For both elements of the training proposal, didactic activities program and the evaluation scheme, we have also added the life skills that each student should develop through the pursuit of learning objectives and the acquisition of the competencies defined for each thematic area.

The evaluation concerned the level, expressed briefly with a grade, that each student had in the specific thematic areas. Obviously, as specified, the evaluation assigned to each student allows to understand the degree of learning of the objectives defined in the evaluation scheme, of the assimilated competencies and of the developed life skills. The evaluation was carried out in two distinct times:

- before the implementation of the experimental teaching proposal (ex-ante), through a period of observation and data collection of one month during the motor and sports education classes (eight lessons);
- at the end of the same (ex-post), through a further period of observation and data collection of one month during the subsequent motor and sports education lessons (eight lessons).

The evaluation was made both to the sample group and to the control group, in order to identify the training progress and pore the basis for a comparison between the traditional teaching offer and the tested one. Below will be specified in detail the Plan of Innovative Educational Activities for Motor and Sports Sciences in primary school (Figure 1) and the related Evaluation Scheme with the explanation of the Skills Plan, Learning Objectives and Life Challenges that students will be able to acquire (Figure 2).

Specifically, the thematic areas of the innovative teaching proposal were the following:

- movements coordination and orientation in space and time;
- recognizing the different parts of one's own body and that of others;
- teamwork Cooperation;
- individual, social and environmental health;
- expressing emotions through body movement and face expression.

Thematic areas	Lesson	Activity	Time	Place	Space	Materials
Coordinating movements and orientating	1	WARM-UP As soon as the students get to the gym, and after changing clothes in the locker room, they ran 2 laps around the field. Afterwards, they had to walk	20 min	Gym	Perimeter of the gym	None

in space and time		on the line that defined the perimeter, while performing exercises aimed both at loosening the muscles and at coordinating more movements (rotating the arms first forwards then backwards, walking on the tips while holding the arms up, opening and closing the arms up while jumping sideways and so on; all this while remaining balanced on the line). MOTHER, MAY I? The class was divided into two groups of 10. Two mothers were chosen, one for each group. The remaining 18 children (9 per group) lined up on the long side of the gym, and the mothers' line up on the opposite side. The mothers, by choosing a number from 1 to 5, told the children how many steps they had to take and which animal to imitate (kangaroo: jumping; elephant: long step; ant: short step; shrimp: walking backward; crab: walking sideways; crane: standing on one leg, and so on). The first one who reached the figure of the mother replaced him/her, and the latter, in turn, went back on the line. VERY SLOW, SLOW, FAST The teacher held a drumstick to beat a tambourine, keeping up with the rhythm. Before starting the game, a certain movement was correlated with each speed (slow: walking slowly; normal: walking fast; fast: running; two beats performed at close distance: galloping; and so on). When the teacher started beating, the children had to move according to the speed of the tambourine in a scattered manner, thus avoiding colliding with each other and remaining within the perimeter.	60 min 40 min	Gym Gym	Center of the gym, in parallel to the long sides Gym Area	None Tambourine and drumstick used by the teacher
	2	WARM-UP Through the forest: the teacher arranged a path on the ground using various materials. Along this path the children had to jump, roll, run, jump on foot together, slalom and so on. They were explained that, in order to get through the forest, they first had to slalom between the trees (cones), roll in the mud (by rolling on a mat), jump on the stones of the pond (by jumping in circles), and so on. THE PATH OF FOOTPRINTS The children drew the outline of their feet on two sheets of paper, using one color for the right foot and another for the left. For example, they used the blue for the right foot, and the green for the left one. With these footprints and those of their companions, they created a path of footprints by positioning them randomly (thus not necessarily alternating them, e.g. in the sequence right - left - left - right - right - left). THE BALL WANTS TO… Each child had a ball and the teacher gave commands, such as "the ball wants to go above the head, under the foot, off the field, inside the circle, bounce right, roll left" and so on.	30 min 45 min 45 min	Gym Gym Gym	Gym Area Gym Area Gym Area	Circles, beams, drumsticks, cones, mats, and so on Sheets and colors Balls and circles

Recognizing the different parts of one'sown and others' body	3	WARM-UP The children had to occupy the space in a scattered manner without invading that of their companions. The teacher had ten circles on the game area. The children had to walk outside the circles to the rhythm of the tambourine. At the teacher's stop signal, everyone had to get into the circles in pairs. Once the pair was formed, they had to follow the teacher's instructions. At the teacher's start they had to get out of the circles in pairs and walk/run/jump to the rhythm of the tambourine; at the stop signal, they had to get into the circle back, and so on. LET'S DISCOVER OUR BODY The children were arranged in four rows in front of the teacher, who had to be able to see them well. The children were asked to move only the part of the body mentioned. It started with their feet, explaining how important they are to the balance. The children had their legs closed, and at the teacher's start, depending on what they were asked for, they had to put their feet close together, move them away, stand on their toes, then on their heels, and so on. They carried out similar activities for all parts of their body: lower limbs, torso, upper limbs, neck and head. THE MIRROR Ten pairs were formed. One component per pair moved in front of the partner as if he/she were a mirror, while the other imitated it. They had to use the movements performed previously in the first activity.	30 min 60 min 30 min	Gym Gym Gym	ym Area art of the ym Area art of the ym Area	10 circles None None
	4	WARM-UP Stretching and relaxation activity. After a short run of a few minutes, the children were lined up and placed at a distance from each other. The teacher showed them exercises to loosen some parts of their body and, while emulating the teacher, they were told what the exercise was for, which part of the body they were going to loosen and which muscle they were going to stretch. LET'S DISCOVER THE BODY OF OTHERS Ten pairs were formed, and the students played the game of body parts recognition, i.e. they touched the partner in the body area indicated by the teacher (the right shoulder, the left heel, and so on). ENGLISH LANGUAGE: A child was chosen and he/she was defined as "*The English child*". When the teacher gave the start, all the children started walking fast and running away from the *English child*, who had to try to touch whoever he/she would find close to him/her. Whoever was touched had to run with the hand covering the "hit" area, after having named it in English. If this child got touched in another area too, he/she also had to use the other hand. If he/she	30 min 30 min 60 min	Gym Gym Gym	ym Area ym Area ym Area	None None None

		got hit three times, he/she became the *English child* and had to catch his/her companions.				
Teamwork Cooperation	5	WARM-UP Once reached the gym, the teacher divided the class in pairs and the students started warming up by running around the field. After two minutes of running, the teacher distributed the pairs of children throughout the gym area, and invited the pairs to put themselves in front of each other. Then the teacher indicated various stretching exercises to the children on the right side, while those on the left were simultaneously performing the same exercises according to the rule of the mirror: the child on the left repeated the movement of the child on the right using his/her hand, arm and opposite leg.	20 min	Gym	Gym Area	None
		CASTLES OF CIRCLES The children were divided into two groups and arranged in the two halves of the field, in the bottom of which they built three "castles" by putting the circles together with the help of the teacher. Within each group, four roles were determined: four children who had to throw the balls to make the opponent's castles fall, three children who had to pick up the dropped balls in the back of the gym and take them to the throwers, three children who had to defend their castles by deflecting the balls. The team that managed to bring down the entire opponent's castles first was the winner one.	60 min	Gym	Gym Area	Circles and balls
		THE FISH IN THE NET The children left the gym and went to the garden. One child was nominated fish-catcher by the teacher and the others were the fish. The fish-catcher had to be able to catch as many fish as possible by grabbing their arms, i.e. the net. The fish-catcher caught the first one by putting his/her arms around him/her; each caught child became a fish-catcher. The fish-catcher held each other' hands to form a net, trying to catch the remaining fish. The game ended when there was only one fish left, who then was the winner.	40 min	Garden	Garden area	None
	6	WARM-UP After leaving their respective locker rooms and wearing in gym clothes, the children started motor activity with a warm-up. The teacher invited them to split into two groups arranged in a single-file line, one behind the other. The children had to perform some types of gait (skips, jumps, cross runs, and finally, dribbles with a basketball). At the end of the pre-established path they had to go back, running towards the subsequent member of their team, high-fiving him/her with the hand; then the subsequent child had to perform the same path as the previous one. The team with the members who completed the path first, finally got the win.	20 min	Gym	Half of the gym area	Basketball
		THE GREAT CASTLE The class was divided into two randomly chosen	60	Gym	Gym	Rope, circles,

		groups. The space had to be very large and without external obstacles, so the whole gym area was employed. The teacher divided the field into two parts with a rope. In the respective bottoms of the two halves there were two circles with a flag (it could be a handkerchief or any other object) into them. The two teams were positioned in the fields; in each team, the children had roles to play: there were those who had to defend their own area, and therefore also their flag, other ones had to run to attack the other field. The children of the team who had to attack, had to run towards the opposing field trying not to get caught by the members of the other team, in order to get their flag. If they were caught, they had to stay still in the place where they had been touched. In order to free a player from the same team, the child had to hold his/her hand and try to go back to his/her own field. If the members of one team managed to get the opposing flag without being touched, they couldn't be immobilized. The winner was the team that managed to take the opposing flag into its own field first, without being touched.	min		Area	handkerchiefs or other materials to make the flag
		THE RACE IN PAIRS The competition consisted of teams divided into pairs. The pairs were chosen randomly so as to allow each child relating to all the other members of the class. The teacher connected each couple with a ribbon by tying the right leg of one child with the left leg of the other child. Then the teacher, using two ropes, created a start line (from where the couples had to start) and a finish line. Each couple had to perform a small obstacle course consisting initially of a slalom with skittles, a low obstacle to jump over and a small run. At the start, two pairs of the two respective teams at a time had to start the course, and the first pair to reach the finish line first got the win.	40 min	Gym	Gym Area	2 ropes, 10 ribbons, some skittles, 1 obstacle
Individual, social and environmental health	7	WARM-UP After reaching the gym and putting on their gym clothes, the children started their motor activity. The teacher proposed them breathing exercises, inviting them to imagine that they were the wind, blow first slowly and then stronger and stronger, and finally slowly again. The children then ran three laps, stopped and caught their breath slowly and correctly, thanks to the teacher's suggestions.	20 min	Gym	Gym Area	None
		RECYCLING IS FUNNY! The teacher placed three bins in the middle of the gym: one for the paper, one for the plastic materials and one for the organic waste. The teacher, in agreement with the other teachers, made students throw all the garbage away for a week in a single bag (except for the organic waste), and took this bag back for the purposes of the game. As for the organic waste, the teacher brought twigs, dried leaves, flowers or other things from home. The teacher gave each child an object to throw away and this child, according to	60 min	Gym	Half of the gym area	Circles, skittles, rope, bins, waste

		the bin he/she had to reach, had to perform a certain path: to reach the paper waste bin, he/she had to jump into the circles with only one leg; to reach the plastic materials waste bin, he/she had to slalom between the pins; finally, to reach the organic waste bin, he/she had to walk in balance on a rope placed on the floor.				
		THE FLYING CARPET The teacher divided the children into teams of two, and put two teams at a time in competition. Each team had to try to keep a sheet of paper in the air by blowing it from below. The first team that dropped the sheet on the ground lost the match.	40 min	Gym	Gym Area	Sheets of paper
	8	WARM-UP After reaching the gym and putting on their gym clothes, the children ran three laps. They lined up in single file and, by starting one at a time, performed the types of gait proposed by the teacher (jumps, skip, butt kicks run, galloping, and so on).	20 min	Gym	Gym Area	None
		LET'S FEED OURSELVES! The teacher prepared some cards at home, on which there were the names of foods. Four circles were placed on the ground: one included fruit, one included vegetable, one included food to eat once or twice a week, and finally one included the food to avoid. The children picked the various name tags containing the name of the food from a box, and according to the picked name, they had to place it inside the exact circle.	40 min	Gym	Gym Area	Circles and posters
		CREATING BY RECYCLING The teacher divided the class into three teams, and assigned each team the task of creating tools, which are employed in the gym, using recycled materials. The teacher then gave suggestions to these teams, like the way to use paper and tape to create different soccer balls, create baseball bats by joining two plastic bottles, and create circles by rolling sheets of paper and sticking them with tape. Once these tools were created, the teacher asked the children what games they could have played by using them.	60 min	Gym	Gym Area	Waste materials and tape
		In this lesson, the disabled student carried out the same activities as her classmates but, unlike the whole class, she was evaluated on the basis of other objectives, such as coordination, balance, cooperation, and other ones which will be described in detail in the subsequent pages.				
Expressing emotions through body movement and face expression	9	WARM-UP Once the children proved ready for the gymnastic activity, they ran five laps. Then the teacher made them remind of the various emotions experienced, for example, by asking them in which situations they had felt joy, sadness or fear.	20 min	Gym	Gym Area	None
		LET'S GET EMOTIONAL! The teacher prepared some sheets of paper on	40	Gym	Gym	Some sheets of

		which some emotions were reported, and then scattered them all over the floor. The children ran around these sheets, and when the teacher told them to stop, each child picked up a sheet of paper from the floor, read its contents and tried to reproduce the emotion he/she felt through a face or body expression.	min		Area	paper
		MAKE IT WITH EMOTIONS! The teacher divided the class into two teams. The children had to shoot a basket in turn. Once they did it, the teacher showed an image showing a subject expressing an emotion through the various face expressions. The children were invited to recognize the emotion. If the children could do both, i.e. if they managed to shoot a basket and recognize the emotion, they would earn two points; if they could only do one of the two things, they would gain only one point. The team that scored the most points won the match.	60 min	Gym	Gym Area	A basket, a ball and pictures
	10	WARM-UP After reaching the gym and changing clothes, the children ran two laps. Afterwards, the teacher showed the children how to do a full flip, and one after the other, they trained on the mat.	20 min	Gym	Gym Area	One large mat
		RUNNING TOWARD EMOTIONS The teacher placed some circles in the middle of the gym and associated an emotion to each of them. In front of them the teacher arranged paths (including, for example, slaloming between the skittles, jumping into the circles, kicking a soccer ball, and so on). The teacher then asked the children some questions, such as “what kind of emotion do you feel when your mom yells at you? “, or “what kind of emotion do you feel when your dad comes home with a present for you? “. According to their answers, the students had to run towards the circle associated with the emotion they had identified while performing the connected path.	60 min	Gym	Gym Area	Circles, skittles, balls, and other objects
		AN UPSIDE-DOWN EMOTION The teacher described an emotion to a child who reproduced it; afterwards, he/she had to perform two full flips on the mat. Once up, he/she had to think about an emotion, run to another child and tell him/her about it. Then the second child did the same exercise again, reproducing the emotion and performing two full flips.	40 min	Gym	Gym Area	One large mat

Figure 1. Lessons Planning Table.

Thematic areas	Competencies	Learning objectives	Life Skills That develop in the child	Descriptors	Score
Coordinating movements and	The student gains stronger mastery of his/her body	Refining ocular-manual and ocular-podal coordination	Decision Making Creative Thinking	The student can move around in a space in a way that is:	

orientating in space and time	through basic motor patterns, and knows how to orient himself/herself in space and time	Moving in space by following topological indicators. Being able to follow the rhythm of a song Knowing how to carry out an activity within the set time frame	Self-awareness	Confident	10
				Complete	9
				Correct and accurate	8
				Correct	7
				Fairly Correct	6
				Inappropriate	5
Recognizing the different parts of one's own and others' body	The student is able to indicate the various parts of the body through games, and has the linguistic skills required to name them correctly in both Italian and English language	Knowing the various body parts and their names. Knowing the functionality of the body parts, and then knowing how to use them properly in relation to a situation	Creative Thinking Critical Thinking Effective Communication Interpersonal Relationship Skills Self-awareness	The student is able to distinguish body parts and their functions in a way that is:	
				Complete and Confident	10
				Complete	9
				Correct and accurate	8
				Correct	7
				Fairly Correct	6
				Inappropriate	5
Teamwork Cooperation	The student is able to understand, accept and value the rules in the various sporting activities. He knows how to relate positively to others, whether a teammate or an opponent	Knowing about and respecting the rules of a game. Knowing how to be in a group Knowing how to cooperate with all children. Knowing how to accept a defeat Respecting both one's own teammates and the opponents Recognizing the importance of teamwork	Decision Making Problem Solving Critical Thinking Effective Communication Interpersonal Relationship Skills Self-awareness Empathy	The student respects the rules during a team game:	
				Always correctly with self-control and by cooperating with others	10
				Correctly with self-control	9
				Precisely	8
				Correctly	7
				In little precise and difficult way	6
				Inappropriately	5
Individual, social and environmental health	The student knows the basic principles of a healthy lifestyle, respectful of his/her body and the environment.	Learning and knowing how to breathe correctly. Knowing the basics of recycling. Knowing the food pyramid and being aware of what foods to avoid.	Critical Thinking Effective Communication Interpersonal Relationship Skills Self-awareness Empathy	The student actively respects the rules for good food and environmental health in a way that is:	
				Complete	10
				Accurate	9
				Correct	8
				Fairly Correct	7
				Unconfident	6
				Incorrect	5

Expressing emotions through body movement and face expression	The student recognizes emotions, knows how to name them and can recognize them through physical manifestations and face expression	Knowing the names of the main emotions Knowing the physical and face manifestations of emotions Knowing how to recognize the emotions of others	Creative Thinking Critical Thinking Effective Communication Interpersonal Relationship Skills Self-awareness Empathy	The student recognizes the emotions in a way that is:	
				Complete	10
				Accurate	9
				Correct	8
				Fairly correct	7
				Unconfident	6
				Incorrect	5

Figure 2. Competencies and Objectives Plan.

It is important to provide a deepening on qualitative descriptors (Figure 3).

The student can move around in a a space in a way that is:	
Confident	Performs motor activities concerning oculo-manual and oculo-breech coordination without making mistakes It always moves correctly in space following the topological indicators given by the teachers Always respect the set times of each activity It always follows the rhythm of a song correctly It always adapts to the new conditions of space and time He is able to impart movement directions in space to his group mates
Complete	Performs motor activities concerning oculo-manual and oculo-breech coordination committing a maximum of 20% of errors It moves in space following the topological indicators given by the teachers, committing a maximum of 20% errors Respect the set times of each activity by making a maximum of 20% errors Follow the rhythm of a song making a maximum of 20% errors It often adapts to the new conditions of space and time
Correct and accurate	Performs motor activities concerning oculo-manual and oculo-breech coordination committing between 20% and 30% of errors It moves in space following the topological indicators given by the teachers, committing between 20% and 30% of errors Respect the set times of each activity by committing between 20% and 30% of errors Follow the rhythm of a song making between 20% and 30% of errors
Correct	Performs motor activities concerning oculo-manual and oculo-breech coordination committing between 30% and 40% of errors It moves in space following the topological indicators given by the teachers, committing between 30% and 40% errors Respect the pre-established times of each activity by committing between 30% and 40% errors Follow the rhythm of a song making between 30% and 40% errors
Fairly Correct	Performs motor activities concerning oculo-manual and oculo-breech coordination committing between 40% and 60% of errors It moves in space following the topological indicators given by the teachers committing between 40% and 60% of errors Respect the pre-established times of each activity by committing between 40% and 60% of errors Follow the rhythm of a song making between 40% and 60% of errors
Inappropriate	Performs motor activities concerning oculo-manual and oculo-breech coordination, committing over 60% of errors

	It moves in space following the topological indicators given by the teachers, committing over 60% of errors Respect the set times of each activity by making over 60% errors Follow the rhythm of a song making over 60% mistakes
The student is able to distinguish body parts and their functions in a way that is:	
Complete and Confident	He knows the names of each part of the body in Italian and English Associate each part of your body with its correct function Correctly performs the motor functions of the parts of the body on input from the teacher Correctly performs the motor functions of the parts of the body independently He organizes educational games for his group that involve knowledge of the parts of the body and their functions
Complete	He knows at least 80% of the names of each part of the body in Italian and English It requires at least 1 further attempt to use the motor functions of the body parts on input from the teacher Sometimes it does not properly perform the motor functions of the body parts on its own
Correct and accurate	He knows at least 60% of the names of each part of the body in Italian and English It requires at least 2 attempts to use the motor functions of the body parts on input from the teacher Sometimes it does not properly perform the motor functions of the body parts on its own
Correct	He knows at least 50% of the names of each part of the body in Italian and English It requires at least 3 attempts to use the motor functions of the body parts on input from the teacher Often it does not properly perform the motor functions of the parts of the body on its own
Fairly Correct	He knows at least 30% of the names of each part of the body in Italian and English It requires at least 4 attempts to use the motor functions of the body parts on input from the teacher Often it does not properly perform the motor functions of the parts of the body on its own He has difficulty in didactic games that involve knowledge of the parts of the body and their functions
Inappropriate	He does not know the names of each part of the body in Italian and English It does not correctly perform the motor functions of the body parts on input from the teacher It does not properly perform the motor functions of the parts of the body autonomously He has difficulty in didactic games that involve knowledge of the parts of the body and their functions
The student respects the rules during a team game:	
Always correctly with self-control and by cooperating with others	He has never received a penalty during team games He has never protested about the composition of his team regardless of the motor sport activity to be carried out He didn't complain after a team game defeat He has never had a fight with a teammate He has never quarreled with an opponent Help your mates
Correctly with self-control	He received between 1 and 2 penalties during team games Between 20% and 40% of the time they protest for the composition of their team regardless of the motor sport activity to be carried out Between 20% and 40% of the time he complains after a team game defeat Between 10% and 20% of the time you fight with a teammate Between 10% and 20% of the time you fight with an opponent Sometimes he helps his mates
Precisely	He received between 3 and 6 penalties during team games Between 20% and 40% of the time they protest for the composition of their team regardless of the motor sport activity to be carried out

	Between 20% and 40% of the time he complains after a team game defeat Between 10% and 20% of the time you fight with a teammate Between 10% and 20% of the time you fight with an opponent Sometimes he helps his mates.
Correctly	He received between 7 and 9 penalties during team games Between 40% and 50% of the time they protest for the composition of their team regardless of the motor sport activity to be carried out Between 40% and 50% of the time he complains after a team game defeat Between 20% and 30% of the time you fight with a teammate Between 20% and 30% of the time you fight with an opponent Sometimes he helps his mates
In little precise and difficult way	He received between 10 and 15 penalties during team games Between 60% and 80% of the time they protest for the composition of their team regardless of the motor sport activity to be carried out Between 60% and 80% of the time he complains after a team game defeat Between 30% and 50% of the time you fight with a teammate Between 30% and 50% of the time you fight with an opponent He does not help his comrades
Inappropriately	He received more than 15 penalties during team games At least 80% of the time they protest for the composition of their team regardless of the motor sport activity to be carried out At least 80% of the time he complains after a team game defeat At least 50% of the time he fights with a teammate At least 50% of the time you fight with an opponent He does not help his comrades
The student actively respects the rules for good food and environmental health in a way that is:	
Complete	He does not make mistakes in motor sports activities focused on correct breathing He does not make mistakes in the fun-motor activities of the group that require the knowledge of separate waste collection He does not make mistakes in the playful-motor activities of the group that require the knowledge of correct nutrition He does not make mistakes in group play-motor activities that require knowledge of the rules of civilization Respect other children It positively stimulates the group to respect the rules of civilization
Accurate	In motor sports activities focused on correct breathing he makes a maximum of 20% errors In group recreational-motor activities that require knowledge of separate waste collection, a maximum of 20% of errors is made In group play-motor activities that require knowledge of proper nutrition, he commits a maximum of 20% of errors In group play-motor activities that require knowledge of the rules of civilization, he commits a maximum of 20% of errors Respect other children
Correct	In motor sports activities focused on correct breathing he makes between 20% and 30% of errors In the playful-motor activities of the group that involve knowledge of separate waste collection, it commits between 20% and 30% of errors In group play-motor activities that require knowledge of proper nutrition, he makes between 20% and 30% of errors In group play-motor activities that involve knowledge of the rules of civilization, he makes between 20% and 30% of errors
Fairly Correct	In motor sports activities focused on correct breathing he makes between 30% and 50% of errors

	In the playful-motor activities of the group that involve the knowledge of separate waste collection, it commits between 30% and 50% of errors In group recreational-motor activities that require knowledge of proper nutrition, he makes between 30% and 50% of errors In group play-motor activities that involve knowledge of the rules of civilization, he makes between 30% and 50% of errors
Unconfident	In motor sports activities focused on correct breathing he makes between 50% and 60% of errors In group recreational-motor activities that involve knowledge of separate waste collection, it makes between 50% and 60% of errors In group recreational-motor activities that require knowledge of proper nutrition, he makes between 50% and 60% of errors In group play-motor activities that involve knowledge of the rules of civilization, he makes between 50% and 60% of errors
Incorrect	In motor sports activities focused on correct breathing, he commits more than 60% of errors at most In the recreational-motor activities of the group that require knowledge of separate waste collection, more than 60% of errors are made In group recreational-motor activities that require knowledge of proper nutrition, he makes more than 60% of errors In group play-motor activities that require knowledge of the rules of civilization, he commits over 60% of errors
The student recognizes the emotions in a way that is:	
Complete	In motor-sports activities that involve knowing the names of the main emotions, he makes no mistakes In motor sports activities that involve knowledge of the physical and facial manifestations of emotions, he makes no mistakes In the didactic activities that involve the ability to recognize the emotions of the group mates, he does not make mistakes Properly create activities that involve the stimulation of emotions He is always empathetic
Accurate	In motor-sports activities that involve knowing the names of the main emotions, he makes a maximum of 20% errors In motor-sports activities that involve knowledge of the physical and facial manifestations of emotions, he makes a maximum of 20% of errors In the didactic activities that foresee the ability to recognize the emotions of the companions of the group he makes a maximum of 20% of errors He is often empathetic
Correct	In motor-sports activities that involve knowing the names of the main emotions, he makes between 20 and 30% of errors In motor-sports activities that involve knowledge of the physical and facial manifestations of emotions, he commits between 20 and 30% of errors In the didactic activities that foresee the ability to recognize the emotions of the companions of the group he makes between 20 and 30% of errors Sometimes he is empathetic
Fairly correct	In motor sports activities that involve knowing the names of the main emotions, he makes between 30 and 50% of errors In motor sports activities that involve knowledge of the physical and facial manifestations of emotions, he commits between 30 and 50% of errors In the didactic activities that foresee the ability to recognize the emotions of the companions of the group he makes between 30 and 50% of errors He is not empathetic
Unconfident	In motor sports activities that involve knowing the names of the main emotions, he makes between 50 and 60% of errors

	In motor sports activities that involve knowledge of the physical and facial manifestations of emotions, he commits between 50 and 60% of errors In the didactic activities that involve the ability to recognize the emotions of the group mates, he makes between 50 and 60% of errors He is not empathetic
Incorrect	In motor sports activities that involve knowing the names of the main emotions, he makes more than 60% of errors In motor-sports activities that involve knowledge of the physical and facial manifestations of emotions, he makes more than 60% of errors In teaching activities that involve the ability to recognize the emotions of the group mates, he makes more than 60% of errors He is not empathetic

Figure 3. Descriptors.

3. Evaluation of the Experimental Pedagogical Project

At a preliminary evaluation, the class showed weaknesses in several aspects. First of all, most of the students had difficult to coordinate the most complex movements, and they had little clarity about topological indications (left and right confusion). Another difficulty encountered was that of orienting themselves correctly over time: the children found it difficult to keep to a certain rhythm. As far as self-awareness was concerned, some difficulties emerged in the management of one's own body both at motor and emotional level, so the need to work more on the body parts and their functions emerged. Since these skills were missing, team spirit proved to be problematic; this is because there was a lack of recognition of the other as a separate individual to be respected both during the game, and in case of victory and defeat (respect for the rules and fair play). It will also be necessary to focus on respecting one's own health by adopting a healthy lifestyle, therefore a correct diet. Once the children learn to take care of themselves, they will be ready to apply what they have learned in the world around them too, thus learning to respect the environment and laying the foundations for a future civic education. What has been analyzed has also brought to the evidence a lacking level as regards the ability to know how to make a certain decision in relation to spatial, temporal and relational conditions; the children showed criticality in the socio-relationship aspects with the peer group and a lack of empathy towards others, also influenced by a not full awareness of oneself as an individual and as part of a community. Figures 4, 5, 6 and 7 show the ex-ante and ex-post evaluation found on both the sample and control groups.

Student	Partial score on movements coordination and orientation in space and time	Partial score on the recognition of one' s own body and that of others	Partial score on peer cooperation and teamwork	Partial score on Individual, social and environmental health	Partial score on the expression of emotions through body movement and face expression	Final score
M 1	8	6	7	7	7	7
M 2	6	6	6	6	7	6
M 3	6	6	6	7	6	6
M 4	7	6	5	6	6	6
M 5	8	8	8	8	8	8
M 6	8	7	7	6	7	7
M 7	6	7	6	6	6	6
M 8	6	6	7	6	6	6

M 9	6	6	6	6	6	6
M 10	5	6	7	6	6	6
M 11	7	7	7	6	8	7
F 1	7	6	8	7	7	7
F 2	8	8	7	8	9	8
F 3	6	7	7	8	7	7
F 4	6	7	5	6	6	6
F 5	8	7	7	7	6	7
F 6	6	8	6	8	7	7
F 7	7	6	7	7	8	7
F 8	6	6	7	6	5	6

Figure 4. Table of ex ante evaluation - Sample Group.

Student	Partial score on movements coordination and orientation in space and time	Partial score on the recognition of one' s own body and that of others	Partial score on peer cooperation and teamwork	Partial score on Individual, social and environmental health	Partial score on the expression of emotions through body movement and face expression	Final score
M 1	5	7	6	6	6	6
M 2	7	8	8	8	9	8
M 3	6	7	7	7	8	7
M 4	6	6	7	6	5	6
M 5	6	6	6	6	7	6
M 6	5	7	6	6	6	6
M 7	8	6	7	6	8	7
M 8	6	7	7	8	7	7
M 9	5	6	7	6	6	6
M 10	6	6	6	6	6	6
M 11	6	5	6	7	6	6
F 1	7	6	7	7	8	7
F 2	8	7	7	7	6	7
F 3	7	5	7	6	6	6
F 4	8	6	7	7	7	7
F 5	7	8	8	8	9	8
F 6	6	8	6	8	7	7
F 7	5	7	8	7	7	7
F 8	7	6	5	6	6	6

Figure 5. Table of ex ante evaluation - Control Group.

Student	Partial score on movements coordination and orientation in space and time	Partial score on the recognition of one' s own body and that of others	Partial score on peer cooperation and teamwork	Partial score on Individual, social and environmental health	Partial score on the expression of emotions through body movement and face expression	Final score	Final score variation
M 1	9	7	8	8	8	8	+ 1
M 2	7	6	6	7	8	7	+ 1
M 3	8	8	7	8	8	8	+ 2
M 4	8	7	5	6	6	6	+ 1

M 5	9	9	9	9	9	9	+ 1
M 6	10	9	9	8	9	9	+ 2
M 7	7	8	7	7	8	7	+ 1
M 8	7	6	8	6	7	7	+ 1
M 9	6	7	5	6	6	7	+ 1
M 10	7	8	9	7	8	8	+ 2
M 11	8	8	7	9	8	8	+ 1
F 1	8	7	8	9	8	8	+ 1
F 2	10	10	9	10	10	10	+ 2
F 3	9	9	9	8	9	9	+ 2
F 4	7	8	6	6	7	7	+ 1
F 5	9	8	7	8	8	8	+ 1
F 6	6	10	10	10	10	8	+ 1
F 7	8	7	8	8	9	8	+ 1
F 8	7	7	8	7	8	7	+ 1

Figure 6. Table of ex post evaluation - Sample Group.

Student	Partial score on movements coordination and orientation in space and time	Partial score on the recognition of one' s own body and that of others	Partial score on peer cooperation and teamwork	Partial score on Individual, social and environmental health	Partial score on the expression of emotions through body movement and face expression	Final score	Final score variation
M 1	5	7	6	6	6	6	-
M 2	8	8	8	8	8	8	-
M 3	7	8	7	7	8	7,5	+ 0,5
M 4	6	6	7	6	5	6	-
M 5	6	6	6	6	7	6	-
M 6	6	7	6	7	6	6,5	+ 0,5
M 7	8	8	7	7	8	7,5	+ 0,5
M 8	7	7	7	7	7	7	-
M 9	6	7	7	7	7	7	+ 1
M 10	6	6	6	6	6	6	-
M 11	6	6	6	7	5	6	-
F 1	6	6	6	7	7	6,5	- 0,5
F 2	8	7	7	8	7	7,5	+ 0,5
F 3	7	6	6	6	6	6	-
F 4	8	8	8	8	8	8	+ 1
F 5	7	8	8	8	9	8	-
F 6	6	7	7	8	7	7	-
F 7	7	7	8	8	7	7,7	+ 0,5
F 8	7	7	7	7	7	7	+ 1

Figure 7. Table of ex post evaluation - Control Group.

Thanks to the observations and data collection carried out in the month of evaluation, done at the end of the didactic activity, it was possible to process the ex-post evaluation marks for both groups. By comparing these marks with those assigned in the month of evaluation made before the didactic activity, we analyzed the following average variations for the two groups:

- average variation of the sample group: +1.263;
- average variation of the control group: +0.263.

4. Discussion and conclusions

The trend to a sedentary lifestyle is increasing among children too, and the occasional opportunities for children to exercise are fewer and fewer. Therefore, motor education at school is a good way to bring children closer to exercise, and maybe even to make them enthusiastic about sports activities.

Motor activity promotes the development of good self-esteem and self-awareness of one's abilities and limits to be overcome as it implies the achievement of small daily goals of gradual difficulty and aiming for new goals by putting oneself to the test can be stimulating; satisfaction with the commitment put into the activity, in fact, increases confidence in one's abilities and improves the child's self-perception. This automatically stimulates the individual in the search for useful solutions to overcome the various critical issues he encounters during his journey (problem solving) and prepares him to make important decisions for himself and for his team (decision making).

Motor education offers benefits for learning too: it increases cognitive skills, coordination, attention and concentration, stimulating, according to the activities and situations that the child has to face, both creative thinking and critical thinking. The measure establishing motor education at school as curricular didactic activity can thus be an important first step in this sense. The decision to introduce a minimum number of hours and the demand for specialized teachers for motor education, in fact, reflects the importance that movement plays in children's development. The movement, understood in its pedagogical meaning, is a child's right, just like reading and making calculations, and this is the perspective in which the proposed experimental didactics project is inserted.

During the work, some fundamental points of motor, formative and educational nature emerged, which are perfectly in line with the thematic areas previously identified:

- space-time coordination;
- body awareness;
- cooperation;
- health;
- emotionality.

For each of these points, didactic work was designed that included learning objectives, the development of skills and the stimulation of the acquisition of certain life skills.

Based on the analysis, we designed a course consisting of ten lessons of two hours each. Each lesson was composed of a first warm-up part, and a second part involving activities and educational game. Two lessons of two hours each were dedicated to each objective.

Globally, this structure proved efficient because the children achieved satisfactorily the set results, as in the case of the remarkable improvement in coordination or knowledge about their body. However, it is evident that the time limit only allowed to lay the foundations for a concrete formative progress on the part of all the little students.

In the month following the ten lessons we carried out both a general and individual evaluation of the sample group and of the control group; so, we created a table in which we

assigned a score for each objective, so as to obtain an overall evaluation of each student by averaging the evaluations for the various indicators.

The results measured with the ex-post evaluation highlighted an important training development of the sample group, especially if proportionate to the limited time of the teaching project and if compared to the results pursued by the control group that did not implement the experimental teaching activities. This confirms how an appropriate didactic planning is essential to favor the real use of the educational potential of physical and sports sciences. The results showed that in addition to progress in motor learning, in children there was the development of values and skills useful for the construction of the person as an individual and as a useful element of a community, capable of creating positive and empathic relational structures. The school, especially the primary one, can and must represent the primary place where all the pedagogical potential of physical and sports education is expressed: learning, through play, movement, corporeality, of life skills from a very young age is an incredible opportunity for concrete social and community progress, which any formal educational institution should aim for. The work carried out is therefore part of a research path that intends to support the concrete formalization of motor and sports sciences within the first school levels, as the main educational and pedagogical disciplines capable of substantially contributing to real progress. social status of current and future generations.

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