THE ROLE OF MOTOR-SPORTS DIDACTICS IN PRIMARY SCHOOL: THE TEACHER'S PERSPECTIVE

IL RUOLO DELLA DIDATTICA DEL GIOCO MOTORIO-SPORTIVO NELLA SCUOLA PRIMARIA: LA PROSPETTIVA DEL DOCENTE

Davide Di Palma
Università degli Studi della Campania "Luigi Vanvitelli"
davide.dipalma@unicampania.it

Giovanni Tafuri
Università degli Studi di Napoli "Parthenope"
giovanni.tafuri@uniparthenope.it

Double Blind Peer Review

Citazione

Di Palma D., Tafuri G., (2023) The role of motor-sports didactics in primary school: the teacher's perspective, Giornale Italiano di Educazione alla Salute, Sport e Didattica Inclusiva - Italian Journal of Health Education, Sports and Inclusive Didactics. Anno 7, V 3. Edizioni Universitarie Romane
FUORI CALL

Doi:
https://doi.org/10.32043/gsd.v7i3.968

gsdjournal.it
ISSN: 2532-3296
ISBN: 978-88-6022-483-5

ABSTRACT

The contribution of motor-sport game in the scholastic learning processes of young people is certainly a recurring theme in the scientific literature in the pedagogical and didactic area, but it remains a territory that has not yet been explored from a practical point of view. In this regard, the present study aims to evaluate, from the point of view of the teachers, the results of the design of an innovative teaching protocol which takes into account the important contribution of sensory-motor play in the development and consolidation of teaching knowledge, enhancing its transversal potential.

Il contributo del gioco motorio-sportivo nei processi di apprendimento scolastico dei giovani è certamente una tematica ricorrente nella letteratura scientifica di area pedagogica e didattica, ma rimane un territorio ancora poco esplorato dal punto di vista pratico. A questo proposito, il presente studio si propone di valutare, nella prospettiva dei docenti, gli esiti della progettazione di un protocollo didattico innovativo che tiene conto dell'importante apporto del gioco senso-motorio nello sviluppo e nel consolidamento dei saperi didattici, esaltandone il suo potenziale trasversale.

KEYWORDS
Motor-sport game, Transversal Didactics, Teacher's Perspective, Primary School
Gioco motorio-sportivo, Didattica Trasversale, Prospettiva del Docente, Scuola Primaria

Received 13/09/2023
Accepted 18/10/2023
Published 07/12/2023

Introduction

The habit of motor activity is a behaviour that is learnt from childhood and, as such, tends to become an integral part of a person's life or not (Nicolosi, 2015). Numerous scientific works have long since ascertained the contribution of physical activity in achieving harmonious individual psycho-physical development (Kulinna, 2008). In particular, when submitted in a playful form, it proves to be a preventive tool in younger age groups not only useful for postural deficits or altered physical conditions but also for emotional and socio-relational problems. In addition to this, recent research has shown the existence of a favourable correlation between movement and the acquisition of cognitive abilities (Nicolosi, Greco, Mangione, Sgrò, Lipoma, 2016): the positive repercussions are seen immediately in the child's school performance and later in his or her daily activities, which will go on to form the motor skills on which to base future adult life.

In spite of the above, nowadays, we unfortunately witness a reality where children have an increasingly sedentary lifestyle, favouring television and video games in their free time, often supported by caregivers who, frightened by the dangers of playful activities in the open spaces of chaotic and dangerous cities due to traffic and/or crime, prefer their children to stay indoors. Although many children engage in more or less regular motor-sports activity, this is generally included in a very sedentary daily routine that characterises school and home environments. It therefore appears extremely important to promote movement from an early age and, in this perspective, the school system must play a fundamental role through effective play-motor initiatives (Werner, Burton, 1979). Specifically, in the first ten years of life, the modus operandi of activities should prefer the practice of basic motor tasks involving large muscles and having fun and participation by all; only later, from secondary school onwards, are more intense and prolonged physical efforts requiring more specific strength and skills recommended. With regard to timing, on the other hand, it would be sufficient to dedicate short sessions of 20-30 minutes a day during school hours to motor activities, preferably for every day of the week so that children can appreciate the pleasure of moving. It is clear, that the sense of what is described in this paper is to highlight the contribution of sense-motor play in developmental age in a framework of interpretation that never loses sight of the wholeness of the person as a body, movement, thought and action in the awareness that the cognitive dimension inherent to learning is closely intertwined with the emotional dimension, the affective area and the social sphere (Lepine, 2013): it is not about a physicality aimed at the good

execution of exercises, but a constantly changing corporeity to be educated in relation to oneself and others.

1. The Experimental Teaching Proposal: Basic Elements

In light of what has just been described and believing in the strong interdisciplinary potential of sense-motor play, it is intended to promote collaboration between teachers in order to create a network not only between the various professionals in charge of the education of tomorrow's future adults, but also between the different knowledge they mediate. The following intervention was based on the reading of various articles proving that the subject that is considered the most difficult and boring to study is mathematics (Humphrey, 1967); consequently, by comparing and integrating the objectives to be achieved by age group, both in the aforementioned school discipline and at a motor level, it was demonstrated that movement performed in a playful manner is also able to support and improve the understanding and learning of mathematics (Kaprinis, Digelidis, Papaioannou, 2009). It is intended to demonstrate that every discipline, thanks to the creativity and skills of the teachers, can find a home in the gym or in a space that is not exclusively that of the classroom. The proposed intervention also aims to enrich the school experience through daily lessons in which the child will improve theoretical aspects through bodily experience and personal experience in a playful manner: therefore, the intention is to offer a training offer based on motor proposals that can become an integral part of the didactics of school knowledge, according to the emerging training needs and respecting the singularity of each child, in the hope that this work will be a guide and spur to produce new ideas that give more and more space to playful-motor activity in everyday school life (Horrigan, 1929). In addition to the didactic goals to be achieved, consideration was also given to the educational objectives, in the socio-relational sphere, that a transversal and experimental proposal based on motor-sports play can pursue.

2. Research Structure: from Sampling to Evaluation Process

Over a period of three months, 20 primary schools in the province of Naples were involved in the research, with the active participation of 100 mathematics teachers who delivered the experimental teaching proposal to a total of 2134 pupils with an average age of 8.5 years. The mathematics teachers, before implementing the

experimental protocol, for a period of 4 weeks, shared its design with 20 motor and sports science professionals who then supported the teaching action for the entire duration of the research project. It is necessary to emphasise, at the outset, that the following proposal starts from the conviction that it is not possible to make a clear distinction between the cognitive and morpho-functional levels: in fact, from the point of view of the globality of the training process, one cannot think of mechanistic gymnastics, made up of imitated, automated and repeated gestures; on the contrary, one has attempted to envisage the presence of movements in the child's life, the implementation of cognitive processes, the awareness of relationships experienced as cooperation and the physical effects and emotional sensations that movement provokes.

Consistent with the motivations outlined above, a work plan of play-motor proposals was organised aimed simultaneously at:

1. to the teaching and consolidation of mathematics;

2. the improvement and stabilisation of basic motor schemes and the stimulation of coordination skills.

In practical terms, on the basis of the ministerial teaching programme, the following areas were addressed:

1. Mathematics:

- Numbers (cardinal and ordinal numbers, increasing and decreasing order, progressive and regressive numbering within and beyond 100 and operations);

- Space and figures (recognition, representation and position of objects in space: right/left, open/closed lines and plane geometric figures);

- Relations, data and predictions (solving concrete problem situations);

2. As far as the motor part is concerned

- Basic motor patterns and different gaits (feet together, legs apart, single-legged, etc.);

- Sensory perception and stimulation (organising and managing coordination skills in relation to balance, orientation and rhythmic sequences);

- Consciously assuming and controlling postures and gestures in an expressive manner.

With regard to the evaluation process of the proposed experimental teaching activity, having chosen to investigate the teacher's perspective, a questionnaire, created with Google Forms, was administered to the sample of 100 mathematics teachers in order to investigate their perception of this transversal and innovative approach.

- The questionnaire was administered both in a phase prior to the concrete implementation of the teaching protocol, and in a phase afterwards, in order to identify and analyse any changes in the teachers' evaluation. The questions were proposed mainly in closed form, but in the final part of the questionnaire it was decided to give voice to the teachers' thoughts by inserting two open-ended questions; in particular, the closed-ended questions included the following alternatives:

- “I agree”;

- “I quite agree”;

- “Disagree”.

Finally, the open-ended questions at the end of the questionnaire were analysed by means of content analysis software that made it possible to identify the main items of interest for the research conducted.

3. Analysis of the results

The following table shows the results, in quantitative terms, of the responses received from the teachers involved, both before they joined the experimental teaching proposal and after they actively participated in it. In this way we can also appreciate the different impressions of this transversal training approach according to its didactic validity.

Questions	Agree		Quite agree		Disagree	
	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER
1. The proposed protocol can bring about	64	80	26	15	10	5

real improvements in the pupils' motor skills.						
2. The presentation of mathematics topics in the chosen didactic form can foster pupils' interest and motivation to study.	70	82	15	18	15	0
3. With the chosen didactic line, children can report a real improvement in their learning of mathematics.	45	75	27	12	28	13
4. Proposing mathematics topics in the chosen didactic form can improve pupils' socialisation with their classmates.	60	77	20	13	20	10
5. With the chosen line of teaching, students can reap important health benefits.	80	90	20	5	0	5
6. The teaching proposal chosen favours the acquisition of skills as well as knowledge.	75	88	12	4	13	8
7. In order to implement the chosen teaching protocol safely and in accordance with ministerial guidelines, a degree in exercise science is required the figure of the sports science graduate.	56	73	20	12	24	15
8. It would also be useful to apply the protocol in the presence of the support	55	68	24	19	21	13

teacher.						
9. The lesson delivered through the chosen teaching methods is accessible to all.	30	50	35	26	35	24
10. The chosen teaching protocol is really feasible within the school context.	30	45	40	45	30	10
11. Who, in your opinion, cannot participate or would participate with difficulty?	Content Analysis					
12. What limitations (space, time, resources, etc.) could hinder the actual implementation of such a project?	Content Analysis					

Table 1: Results of the questionnaire (our elaboration)

As can be seen from the results collected, overall, there was a clear shift of evaluation towards the alternative of a positive response with regard to the experimental didactic activity conducted; it is possible to identify that the positive aspects of the design relate to the fact that the majority of the sample considered playful activity to be a necessary condition for the education of children from a bio-psycho-social perspective.

Critically analysing the responses, a certain enthusiasm and confidence emerged regarding the use of play-motor activities in the learning processes of mathematics and, more generally, of school subjects, which is useful in refuting the strong prejudice towards this discipline on the part of many professionals in the field who do not believe in the real interdisciplinary potential of motor-sports activities in primary school curricula (Arnold, 1988; Chen, Cone, 2011). There was also an awareness on the part of the teaching staff of the importance of the educational figure of the motor and sports science professional within the primary school context, where the elements of corporeity constitute a potential key to the development of very young pupils. In confirmation of what has been expressed, there is support from the answers analysed regarding the formative nature of the didactic proposal, not only in the learning of algebraic and motor notions, but also in the dynamics of socio-relational development and in the complicated process of

transforming the knowledge learnt into skills that are also useful in extra-curricular contexts. These aspects take on fundamental importance in relation to the school level, which sees pupils in a period that accompanies them in the transition from their egocentric conception of self towards an awareness of being elements of a community with which they can relate and which must be accepted in its heterogeneity. Some critical issues emerged from the answers given to questions 10 and 11, which draw attention to the main problems of the Italian school system in terms of accessibility and availability of spaces and tools useful for encouraging educational initiatives based on motor and sports education. This consideration correlates with the survey carried out through the open-ended questions, the results of which, obtained through content analysis, allowed the following considerations to emerge.

- To the question "who, in your opinion, cannot participate or would participate with difficulty?", the answers showed a particular attention and sensitivity to the singularity of the person in every aspect and at every level: whether it is a matter of overt pathological conditions, disability (physical or intellectual), specific learning disorders (SLD) or special educational needs (SEN), all those who left their feedback agreed on the importance and necessity of the adaptability of the context to the particularities of each person (Aberšek, Ropi, Hus, 2009);

- To the question "what limitations (space, time, resources, etc.) could hinder the real implementation of such a project?", the answers outlined a critical scenario that, unfortunately, represents the current reality of the Italian school system, especially at primary level, but which mainly afflicts some southern regions; it was possible to identify some recurring themes and to group them into the following categories:

- The ingrained mentality of parents who are not properly trained in a 'culture of movement' and teachers who often have no desire to get involved by deconstructing their tried and tested teaching methods;

- The school organisation that provides increasingly restricted times for motor-sports activities in order to leave as much space as possible for the so-called 'core' subjects (De Caveda, Ramos, Vélez, López, 2010);

- The inadequacy or complete absence of facilities;

- The lack of sports facilities;

- The excessive bureaucracy.

With this in mind, for the promotion and implementation of the proposed intervention, the choices will certainly have to take into account other sectors such as health, education, culture, transport, planning, urbanism and economics because these can determine both the success and failure of the activities to be carried out (Cone, Werner, Cone, 2009).

4. Concluding Didactic-Pedagogical Considerations

In the light of what has emerged from the analysis of educational planning, it is evident how necessary it is to insist on educational proposals of this kind and that take into account the importance of motor-sports activities carried out in a playful form in order to raise awareness of the potential benefits that can be developed in the bio-psycho-social sphere of individuals, in the emotional and socio-relational dimension, as well as in the learning processes of school knowledge, especially in the early age groups (Lepine, 2013; Mosston, 1966). By analysing the teacher's point of view, the research made it possible to bring to light both their initial mistrust of educational initiatives based on the educational action of the motor and sport sciences and their subsequent change of perspective with regard to these proposals. The process of becoming aware of the didactic and educational potential of this discipline was certainly induced both by the results, in terms of notional and formative learning, observed on the many students involved in the activity, but also by the process of co-training and support provided by the professionals in the motor dimension. Precisely for this reason, it is evident how relevant two focal points affecting the school system are:

- the specific preparation in the field of motor-sports didactics by the educator of reference

- the predisposition for collaboration between teachers in order to stimulate transversal teaching plans that enhance the training potential of each discipline.

While on the one hand, a well-planned and structured didactic and a trained and collaborative teaching staff are elements capable of successfully overcoming many of the barriers to learning and training present within the school system, the research emphasised how true it is that part of the quality of the activities organised will depend on the adequacy of the educational environment in terms of the availability of suitable spaces, facilities and tools. In this sense, the policy makers of the Italian

school system, especially those at the primary level, are called upon to respond to the important challenge of improving the efficiency of environments with a view to supporting the processes of didactic evolution and fully satisfying the students' educational needs.

Ultimately, it is to be hoped that in the near future the deserved importance will be formally attributed to recreational-motor activity, which can be a driving force for a school system projected towards the pursuit of both its learning objectives and the objectives inherent in its social and cultural development of the community from the earliest years of life.

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