Physical Education in Primary School

Researches • Best Practices • Situation
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Table of contents

9 Introduction
Colella Dario, Antala Branislav, Epifani Simona

RESEARCHES

17 Abdelaziz Saci, Sidali Benabderrahmane, Meziane Bouhadj
The effect of teaching by competences in the development of some basic skills for primary school children (from 6 to 7 years old)

25 Bendíková Elena
Effects of the overball exercise programme on a dynamic function of the spine in school children

39 Bernstein Eve, Herman Ariela
Identification of code-switching behaviors during primary instruction of competitive activities

45 Boronyai Zoltán, Vass Zoltán, Csányi Tamás
The correlation between the quality of physical education and students current and future attitudes towards physical activity

53 Čillík Ivan, Kremnický Juraj, Kollár Rastislav, Mandzáková Martina
General physical performance and physical development of pupils attending the first stage of primary school

67 Colella Dario, Mancini Nicola
Interventions for the promotion of motor activities in primary schools in Italy. The SBAM project. Results of the first monitoring of motor development

83 Dania Aspasia, Chatziemmanouil Panagiota
Play preferences of primary grade students within a physical education games program
97 Ignjatovic Aleksandar, Cvecka Jan
   Resistance exercises programs as a part of physical education curriculum for prevention of obesity and inactivity in children

109 Lysniak Ulana, Reader Stacia
   Circulation of the blood heart walk through: flipped classroom lesson

123 Petrović Jelena, Martinović Dragan, Petrović Ivan, Branković Dragan
   Do gender and doing sports have an impact on motivation in physical education?

137 Šebek Luděk, Hoffmannová Jana, Klimešová Iva, Maina Michael, Schlegel Maina Julie
   Benefits and challenges of promoting bicycle transport in Czech primary school children through the Ride2sCool multiple-player community project

155 Šeráková Hana, Janošková Hana
   School environment and posture of primary school children in the Czech Republic – case study

171 Zerf Mohammed
   Posture alignment: the missing link in health and fitness program Algerian primary schools

BEST PRACTICES

185 Antala Branislav, Luptáková Gabriela, Tománek Ľubor
   "Enhancing physical education teachers’ qualification” as a best practice of primary school teachers’ lifelong education in Slovakia

199 Baker Colin, Leasu Florin, Nutt Gareth, Abrahams Mick, Wittmannova Julie, Kudlacek Michal, Goudas Marios, Kolovelonis Athanasios, Rogozea Liliana, Wojtasik Tomasz, Dziegieł Anna
   Enhancing Quality in Primary Physical Education (EQuIPPE): a European project to increase primary teachers’ skills and confidence

213 Bulca Yeşim, Demirhan Gıyasettin
   Best practices of evaluation on elementary school students’ learning the concepts of movement and sports through drawing technique

223 Carraro Attilio, McCuaig Louise, Marino Massimiliano, Gobbi Erica
   Values-based education through physical education and sport: a Toolkit for teachers
Physical and sport education national development project school based: Sport di classe © CONI (School class sports- Italy)

The promotion of wellbeing and active lifestyles in primary schools through a continuing professional development: an Italian good practice

“Lombardia in gioco, a scuola di sport”, a regional project for the implementation of physical activity in a region of north-west Italy in 2015-2016

Best physical education practice in Malaysian primary school: action research to enhance game skills learning through innovative ideas

Elementary school based physical education intervention in 1st and 4th graders in Tirana

ViPER project: to draw European knowledge together to support children’s plays

“Più Sport @ Scuola”: a good practice for Veneto primary schools?

What is meaningful physical education in a South African context of rural poverty

Primary school physical education in New Zealand: a need for realignment in a contested space

School physical education in Chile: in search of an inclusive curriculum

Physical education in Mexico
395 Ivashchenko Sergii
Peculiarities of physical education of primary school children suffering from chronic diseases

403 Killian Chad M., Graber Kim C., Mays Woods Amelia
Elementary physical education in the United States: policies and practice

415 Landry Fouda Omgba Nsi André, Nwana Dinga DohBobga Macias, Ebal Minye Edmond, Mibo’o Pascale, Guessogo Wiliam, Belinga Bessala Simon
A critical look on curricula in sports and physical education at primary education in the francophone and anglophone sub systems in Cameroon

433 Lleixà Teresa, Coral Josep
Catalonia’s competence-based physical education curriculum

447 Malcev Marjan, Popeska Biljana
Primary school physical education in Republic of Macedonia: condition and challenges

463 Masaryková Dana, Antala Branislav
Primary physical education in Slovakia

475 Tinto Amalia, Campanella Marta
Italian primary school: specific role of rhythmic education in young children of 10 years

487 Vladova Ina
Bulgarian model of olympic education in primary schools
This paper examines aims, cultural background, and significant results of the PS@S project funded by the Veneto Region from 2004 to 2014 to develop a new model for physical activity and sport promotion among primary school children, collaborating with local administrations and sport clubs. The PS@S project was based on Project Coordinators (PCs), physical education teachers or graduates in exercise and sport sciences, that collaborated with primary school teachers. PCs gave organizational assistance and support to the teachers and/or were directly involved in planning and realizing sport-related activities, including recreational and cultural events. PCs also promoted school sports and the connection with local sport clubs/associations. The scientific background leans on the overwhelming evidences of the risks related with sedentary behavior among children and youth and on the health benefits (physical, psychological, and social) of regular physical activity. The ecological approach, centered on the personal skills, social determinants and environmental conditions, was an important guideline of the project. Data collected on more than 500 schools involving about 370,000 students suggests that PS@S project can be considered as a good practice for physical activity promotion intervention that could be utilize for appropriate youth sport dissemination also in other countries.

**Key-word:** Children, Health promotion, Physical activity, Physical education, School.
Introduction

This paper describes the aims, the cultural background, the organisational structure and some results of the 10 years of “Più Sport @ Scuola” (PS@S). The project, proposed by Veneto Region, started in year 2004/2005 and ended in 2014/2015. One of the main aims of the project was to create a bridge between schools and community to give to the students significant opportunities to improve their physical activity and counteract the “obesity epidemic”. This initiative is inspired by the ecological model (Salmon et al., 2007) applied to the promotion of physical activity in the school. This approach was adopted with the intention to favour the integration among the competences of the Regional Institutions (Sport Councillorship, School Direction), University of Verona, Schools, Local authorities and Sport system. At the end of the ten editions of the Veneto Region project, we are confident that an articulated reflection on this experience is extremely useful for School, Sport System, University and Public Administration.

Background

A lot of organizations and guidelines recommending a suitable amount of Physical Activity for all population ages, especially for the children (WHA, 2002; Strong et al., 2005; CCE, 2007; WHO, 2010; CSEP, 2011a-b; Thornton et al., 2016). Kids love running, jumping, throwing and climbing, and generally, they like to move freely with non external stresses. Despite of that natural inclination, in recent years they’ve become less active. It is estimated that children of fifty years ago spent, an average, of 600-700 kcal more per day (Durnin, 1992). That means that kids, today, do one hour less per day of sport or physical activity than their peers of ’60. It is necessary to recall that children and adolescents who participate in higher levels of physical activity are less likely to display risk factors for cardiovascular disease (Boreham & Riddoch, 2001; Strong et al., 2005) and more likely to have positive outcomes in weight regulation (Gutin et al., 2002; Lemura et al., 2002). Emotional well-being has been considered another important benefit of physical activity among adolescents. Regular physical activity has been associated with a high self-esteem and a low level of anxiety in this population (Calfas et al., 1994; Sothérn et al., 1999).

“A life-course perspective is essential for the prevention and control of non-communicable diseases. This approach starts with maternal health and prenatal
nutrition, pregnancy outcomes, exclusive breastfeeding for six months, and child and adolescent health; reaches children at schools, adults at worksites and other settings, and the elderly; and encourages a healthy diet and regular physical activity from youth into old age” (WHO, 2002, 8).

Experts point to the need for the development of physical activity patterns early in life and the school is an obvious place for the development of these patterns (Biddle et al., 2004; Salmon et al., 2007).

The number of overweight children in Europe is growing rapidly. In Italy, the level of overweight and obesity exceeds 30% among 7-11 year old children, whereas this value is in the order of 10-20% in children of the same age in several other European countries (IOTF, 2005). In line with this sedentary attitude, currently in Italy, the number of athletes is the same than in 1991 (CONI, 2014) while inhabitants have grown of about four millions. To contrast sedentarism and promote active lifestyle is necessary to intervene in all environments that influences behaviours of kids and teenagers: family, school, culture, physical environments, facilities... That approach, centred on the personal skills, social determinants and environmental conditions was defined “Ecological approach” (Salmon, 2007). This approach also support the importance of realizing integrated actions against all the determinants that promote unhealthy behaviours.

The model states that appropriate amendments in the social environment will produce individual changes and that the individual support in the population is fundamental for the implementation of environmental changes (McLeroy et al., 1998). In addition, youth behaviour can be interpreted and influenced based on the “ecological model” (Carver et al., 2008).

The PS@S project: to promote physical activity and sport at school

Sport Councillorship of Veneto Region promoted the project with the collaboration of the Regional School Direction and with the Faculty of Sport Science of the University of Verona. The project had the order to highlight sport culture and practice at school and in the community to promote the adoption of active lifestyle by students of Veneto region in the schools of any order and level. In this paper, we will focus on primary school. The project aims to favour the cooperation between schools and other local institutions who have the objective to promote health and sport specifically, public administrations, sport clubs and local health system.
The project was characterized by the figure of a “Project coordinator” for each school that, for some hours per week, had the role of promote relationships and exchanges between school and local institutions. The main aim is to organize, in a systematic and continuative way, the best didactic offer to the promotion of physical activity and the adoption of active lifestyle from the students. The declared aims from regional documents, that every year illustrated the initiative, can be described as follow:

- Promote an educational and cultural action to promote physical activity so that becomes a lifestyle;
- Rediscover the educational valour of sport for fitness, socialization and behaviour;
- Favour the integration of physical activity and sport in the school curricula;
- Favour the development of a correct concept of competition;
- Favour the participation to the physical activities by the students that not practicing physical activities out of school.

Sport clubs were encouraged to offer their formative experiences and to cooperate with schools. The local administrations were encouraged to support sport associations and schools to give the possibility to extend sport practice in the community.

The project involved scholastic and public institutions of all kind of order and level of the Veneto Region. In Italian primary school there is not an institutional figure of Physical Education Teacher with a specific training, therefore the main aim of the Veneto project was to introduce a Project coordinator with degree in Sport Science. Principal task for the Project coordinators in primary schools was to coordinate and guarantee organisational and didactic assistance to the programming of physical activities. Physical activities and sport, inside and outside school, are a great opportunity to educate young people, but both school and sport system crash with some limits. The time planned for Physical education in scholastic programs is not sufficient, and, on the other side, the sport system is too concentrate in the selection of the most skilled, excluding a large part of population. An alliance between school and community initiatives can improve physical activities and, in consequence, the wellbeing of kids and youth. It is logical to expect that teenagers and children have better possibilities to adopt active and healthy lifestyles, and to be introduced at a regular practice of physical activity if they receive coherent resources and messages from all community.

The Regional Sport Councillorship, in the school year 2004/2005, invested
a million and a half of euro to support, in all educational levels “Più sport @ scuola”. That amount has been reduced, during years, up to four hundred thousand euro, but dedicated only to primary school. The schools responded by integrating the budget received from the Veneto Region with own resources, and other coming from local authorities and sports clubs.

The “engine” of this virtuous relationship among school, sport system and administrations has been identified in the “Project coordinator”, a Physical education teacher, or an graduated in the Sport Science.

Project coordinator has the functions of sport consultant with three fundamental objectives: a) improve cooperation among schools, sport organisations and local administrations; b) improve social attention to physical activity for youth; c) when it is possible, increase time dedicated to sport and physical activity for students. To fulfil the “project coordinator” role was necessary being a physical education teacher at school or, at least, graduated in Sport Science. These features should allow to ensure a methodological-didactic formation in physical education that the great part of primary teachers haven't.

Almost all schools have set up networks with institutions with which they cooperate to propose physical activities and sports. Normally a local network was made up of the school, the Public administration and one or more sport clubs of that area. In some case also some private society, in particular fitness centres, joined the network. Just in rare case was involved health system through doctors or Prevention Department.

Figure 1. The “bilateral” mode of relations between schools and local agencies
The more frequent structure of that local network lies at the centre of the relationships the school that maintains relations with the different institutions in a bilateral way, heading them to realize his own specific initiatives. In this mode the different institutions are involved just in actions that concern them directly, leaving to school the overall view.

In other situations relationships between the institutions of the network is more integrated (Figure 2) allowing to share the general perspective of the local project among different subjects involved.

In this second case, the effort required to the institutions is greater but, potentially, greater is also the expansion of the initiatives. This “integrated network” could become an important assumption for act, in a coordinate way, on the students and local social reality.

To complete the pictures of the collaborators to PS@S is necessary to describe the Coordinators of the Provincial Offices for Physical Education and sport and the University of Verona.

The firsts have a fundamental role on the development of physical education and sport at the local and national level. They also contributed, in a significant way, at the realisation of the project both during its planning and in the organisation of the training of the Project coordinators.

The Faculty of Sport Science of Verona participated to the definition of the program, realized the initial training of the project coordinators, managed a space online for the sharing of Projects of each school and produced the monitoring of activities.
Methods

Data that has been used derive from the “project tabs”, presented from Project coordinators, usually, in December, and from final reports delivered at the end of the school year (June - July). In first years, the documentation were sent in paper format, and the completeness of data could not be verified. Just in 2008/2009 we found a way to receive complete documentation of the schools, connecting the regional contribute with the insertion of the project and final reporting in web site.

Module of the project has been modify during years to highlight different aspects of school initiative, keeping some elements of documentation stable over time.

Qualitative evaluation elements have been derived in many occasions laid down from the program:

– The meetings among Regional Sport Councillorship, Regional School direction, provincial school offices for Physical Education, Faculty of Sport Science;
– Training sessions for Project coordinators (two time a year at the beginning of the scholar year);
– Personal contact, in the presence or by telephone, with components of different institution involved;
– Contacts and feedback, formal and informal, of stakeholders of the sport, administration and research world.

Results

About three-quarters of schools and students in the region have joined the project in the years in which it was made. In the five hundred and seventy two (572) schools involved in the beginning (2006/07), were active around 725 Project coordinators (72.3% Physical education teachers and 27.3% external graduates). Each school developed, in the average, more than four initiatives per year in collaboration with sport clubs and local authorities.

The number of schools that claim to be more active than that provided by regional contribution are more than half (52.8%).

Among the many actions undertaken, one that seems significant is the creation of school networks for the promotion of sports activities on a local basis.
This has allowed to involve, on average, about three hundred and seventy thousand (370,000) students; about 35-45% increased the time spent on physical activity and sport. In particularly, primary school had about half of the projects (43%) involving a similar percentage (53%) of students.

The involvement of local institutions is one of the key points of the program that, by the numbers summarized in Figure 3, seems to have been fully achieved. In this regard we can mention that as early as 2007/2008, 92.1% of the schools had collaboration with external institution.

![Figure 3. Average number of organizations involved in the project initiatives](image)

Already in 2004/2005 almost two thousand local institutions (public authorities, sports clubs and other organizations) were also involved though, most likely, a significant part of these collaborations were previously active. The net increase in later years leads us to believe, however, that the PS@S project has fostered a much more frequent collaboration among local organizations and schools. The reduction in the last year must be attributed, probably, to economic downsizing of the project. One of the most significant elements that characterized the primary school in the realization of PS@S project was the great attention to improving the quality of the proposed physical activities. This choice reduced the attention to increase amount of physical activity for students.
The increase of physical activity occurs only for less than 60% of the projects in Primary School while secondary schools reach higher percentages. The reasons for this difference can be attributed to the various organizational characteristics of the two school levels:

- Secondary schools have access to specific funding for the additional sports activities;
- Primary schools, often, lack sports facilities;
- The elementary teachers have a limited training in physical activities;
- In primary school, in some cases, it is given little importance to physical education.

It should therefore be noted that the need for increased physical practice since the early years of school, though shared by Project coordinators and teachers, clashes with various cultural, organizational and structural difficulties.

Project coordinators and Headmasters have greatly appreciated the project as a whole.
The graph shows the average scores given by the main responsible for the actual implementation of the project; on a scale from 1 to 7 points, the mean values are often higher than six (6).

**Discussion**

It should be stressed that each participant in the project has taken, at the same time, decision-making and operational function, interconnected through regular reporting mechanisms, training and documentation of the initiatives.

- Regional Sport Councillorship, Regional School Direction and University indicated purposes, incurred by project staff suggestions, and realized the administrative necessary;
- The disclosure of the information was disseminated in all schools through formal communications and meetings between the heads of Physical education provincial offices, University staff and Project coordinators. These meetings provide, in addition, significant feedback to the project staff;
- The projects of each school were communicated at the beginning of the school year and, upon completion, the report was presented;
- The collection and sharing projects of each school allowed both to verify the implementation of the initiatives and their reformulation through annual report made by university staff for promoting Institutions, Project coordinators and Head teachers;
The effectiveness of the project is more difficult to assess. School Deans and "Project coordinators" have a largely positive overall judgment. The improvement in the quality of the proposed motor activities, although not measured in an objective, seems to have been achieved in the vast majority of primary schools. The increase of physical activity available to students seems, however, a goal that still has room for improvement. It must also add a further element of analysis produced at the end of PS@S project. A comparison of motor skills between children (ten years) who have participated for four years at project with those of other European countries shows that these are lower in children of Veneto (Lanza et al., 2017). We believe that, rather than undermine the validity of the project, these data confirm the extreme usefulness of initiatives to promote physical activity in primary school. These initiatives, if properly structured, can compensate for the unhealthy lifestyles that are spreading in the Veneto as in much of Italy.

The program has been maintained, despite a constant reduction in funding,
for more than ten years and ended in the 2015/2016. It is very likely that the experience accumulated in the schools in this decade has left a significant stimulus to the promotion of physical activity in this scholastic grade.

The positive judgment of school administrators, representatives of the school, the very extensive involvement of local authorities and sport Clubs, the longevity of the project are the most significant elements of its success. A successful that, probably, can be attributed to the fact that, alongside the commitment fielded by the Sport Councillorship of Veneto Region, alongside the financial means provided by the Regional Administration, the project was able to increase the mobilization of many other resources from all actors involved. Often the Project coordinators played a number of hours greater than provided for in their contract to the realization of the initiatives. Municipalities and sports clubs have offered transportations, facilities, coaches and teachers increasing the opportunities, for students, to practice sport and physical activity.

We hope that the proposal reflection in this text can help to grow the culture of sport and collaboration of the Italian primary school with all local Institution.

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