

Regular physical activity and sport habits through cooperative learning. A Case Study

Hábitos regulares de actividad física y deporte a través del aprendizaje cooperativo. Estudio de caso

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Abstract

One of the most important aims of physical education in school settings is to promote healthy and active lifestyles. The objective of the present study is to find out in detail the way to promote healthy and active lifestyles in a school where cooperative learning is a priority. A case study approach was adopted in order to meet the research objectives. The techniques to collect information consisted of: analysis of school regulation documents, systematic observation and a semi-structured interview. The results show that inclusive approach, motor skills and social skills learning and children autonomy are the proprietary features to promote healthy and active lifestyles, in this context.

Keywords

Cooperative learning; physical education; healthy habits; active lifestyle.

Resumen

Una de las grandes finalidades que persigue la educación física en edad escolar es que el alumnado adquiera hábitos y estilos de vida activos y saludables. El objetivo del presente estudio es indagar de qué manera se lleva a cabo el fomento de hábitos de vida activos en un centro escolar que prioriza el aprendizaje cooperativo en educación física. Para ello se ha

aplicado la metodología de estudio de caso. Las técnicas utilizadas para la obtención de información fueron el análisis documental, la observación sistemática y la entrevista semiestructurada. Los resultados muestran la orientación inclusiva, el aprendizaje de las habilidades motrices y sociales y la autonomía del alumnado como elementos prioritarios, en este contexto, para la adquisición de hábitos de práctica regular de actividad física y deporte.

Palabras clave

Aprendizaje cooperativo; educación física; hábitos saludables; estilo de vida activo.

Introduction

The current educational law highlights the need to develop habits of physical activity to combat sedentarism in students. Primary Education curriculum (Royal Decree 126/14) mentions that physical education is related to health, through actions that help the acquisition of regular physical activity habits and the adoption of critical attitudes towards unhealthy social practices.

Cooperative learning, which seeks achievement in student's learning through group effort and commitment, is increasingly accepted as a model to be applied in physical education classes, as it promotes learning with group support and helps developing the necessary skills for positive social interaction (Metzler, 2011, Velázquez, Aranda, and Pastor, 2014). The present study aims to analyze the way in which cooperative learning in physical education can also promote regular practice habits of physical activity and sport.

To better understand the mechanisms related to the promotion of regular practice habits it is very useful to identify the reasons that lead students to practice physical activity and sports. Fraile and De Diego (2006) point out, among these reasons, "improving health, spending time with friends and growing as a person" (p.106). According to the same study, the majority of students appreciate more recreational type sports than competitive ones. Other studies carried out by Castillo, Balaguer and Duda (2000), García (2005) and García and Llopis (2011) affirm that the most outstanding reasons are: health, affiliation feeling, social recognition, motor performance, personal satisfaction and recreation.

In turn, authors such as Granero-Gallegos, Baena-Extremera, Sánchez-Fuentes and Martínez-Molina (2014) point out satisfaction level, fun and boredom that the student presents to physical education as a determinant of interest and adherence to sports practice.

Another aspect to be noted is that student motivation, both in physical education and the practice of physical-sports activity, will also depend on autonomy. Learning climates that promote autonomy improve intrinsic motivation (Baena-Extremera, Granero-Gallegos, Sánchez-Fuentes and Martínez-Molina, 2013; Reeve, Jang, Carrel, Jeon and Barsh, 2004) and contribute to students "Feeling good about themselves, improving satisfaction and fun towards the subject" (Granero-Gallegos et al., 2014: p. 61).

In the literature regarding cooperative learning in physical education we can find some connections between these motivations and the teaching process. Authors such as Velázquez, Aranda, and Pastor (2014) point out that cooperative learning in physical education is an excellent methodological resource that promotes learning and motor performance. This is related to perceived motor performance that is one of the reasons for practicing physical activity indicated by Castillo, Balaguer and Duda (2000), García (2005), García and Llopis (2011).

Cooperative learning also enables students to develop social skills and improve student relationship (Dyson, 2001; Goudas and Magotsiou, 2009). The development of social skills is an important factor to take into account when promoting habits of physical-sport activity (Fraile and De Diego, 2006).

In addition, as stated by Pujolás (2012), cooperative learning is presented as a methodology linked to the inclusive school movement in order to optimize student learning regardless of individual capabilities. It is a proper way to internalize that anyone can participate in physical and sports activities.

Cooperative learning improves social skills, confidence, general and physical self-concept of students, as well as increasing desire for practicing physical activity (Barba, 2010, Fernández-Río, 2003, Velázquez, Aranda and Pastor, 2014). In the same line Prieto and Nistal (2009) indicate that cooperative learning encourages motivation for physical education and the desire for practicing physical activity, in addition to positively influencing social interrelation, motor performance, increased self-esteem and personal development.

To learn more about how cooperative learning affects adherence to physical and sports activity, the objective of the present study is to investigate how the promotion of active living habits is carried out in a school that prioritizes cooperative learning in physical education.

Case presentation

The research was centered in the school Turó de Can Mates of the Sant Cugat locality (province of Barcelona). It is a public school that bets on innovation and has a physical education teacher that bases its classes on cooperative learning. He understands education as a process that must be inclusive, where learning is for anyone and for everyone. He considers that students must develop at their own pace, always counting on the help and collaboration of their classmates. He also considers that they must practice physical activity achieving shared learning processes that allow them to enjoy with their classmates.

Method

Research has a descriptive-interpretative approach, case study being the method used. The techniques for obtaining information have been documental analysis, direct observation and semi-structured interview.

a) Participants

Participants were students from third to sixth primary education grades at the Turó de Can Mates center in Sant Cugat del Vallés. Each course has two groups with a number of students ranging from 25 to 30 per group. The proportion of students is similar in each group. Also, according to the educational center's PEC the majority of students come from the school's near environment that is considered of a medium-high sociocultural level. Finally, the participation of the physical education teacher of the same educational center should be noted.

b) Dimensions, variables e indicators

Based on three dimensions - center, programming and classroom - a table of variables and indicators was designed that describes the guidelines that should be taken into account for the promotion of regular physical activity and sport habits in an educational center. This table is explained in the results section (Tables 1, 2, and 3) and is based on two previous studies. Indicators of the "center" dimension have been extracted from the work of Lleixà, González,

Monguillot, Daza and Braz (2015), where quality indicators are collected for the evaluation of schools promoting physical and sports activity. Indicators of "programming" and "classroom" dimensions are an adaptation of the questionnaire carried out in the study by Hernández-Álvarez et al. (2010) on the factors that facilitate the frequency of physical activity, in relation to the physical education curriculum.

c) Collecting and analyzing information techniques

Documental analysis

We have analyzed the Center's Educational Project and Classroom Programming, using an observation table based on the study of Lleixà et al. (2015), which establishes school indicators that promote physical activity and sports.

Direct observation

A direct observation of various physical education sessions was conducted during the second trimester of the 2015-16 school year. In this observation, a data collection sheet was designed based on the variables and indicators table referred to in the previous section. This observation had the collaboration and help of the physical education teacher through clarifications on the class functioning and the methodological and evaluation strategies.

Interview

A semi-structured interview was conducted in which the physical education teacher acted as an informant. The script of the interview was designed from the already mentioned variables and indicators table, according to the structuring procedure of the analysis model proposed by Quivy & Campenhoudt (2005). Interview was recorded and the content transcribed. Interview analysis was realized through a categorization of meaning units.

d) Ethical considerations

The school and the University of Barcelona signed an agreement that preserves the ethical aspects of this type of studies. Likewise, the teacher has given his free and informed consent for the results dissemination of the interview.

Results

Below are the results obtained through documentary analysis and direct observation and, in a later section, the results of the teacher's interview will be analyzed.

a) Center results

It points out that in the center's organization and management set of actions there is little explicit presence of actions directed to the promotion of healthy habits acquisition, except the activities offered beyond those realized in class and activities connected to the environment (Table 1).

Table 1. Center indicators.

Variables	Indicators	Yes	No	Observations
Organization and management of actions and activities	Description of the physical activity practice as educational and healthy in the PEC		X	
	Existence of the sports center project.		X	A design exists but it has not been redacted. In addition, they do coordinate to develop physical activity as an out-of-school proposal.
	Explicit actions to promote the practice of physical activity.		X	According to the teacher these actions and activities are not necessary due to the context, he indicates that students are aware in carrying out physical activity. He adds that many children perform physical activity outside the center.
	Specific annual activities to encourage the acquisition of healthy habits.		X	
Offer of extracurricular physical and sports activities	Quantification of activities offered throughout the course.		X	According to the PE teacher it is not considered as necessary or priority.
	Variety of physical-sport activities beyond those realized in physical education classes.	X		
	Connection existence of the activities with the environment	X		

b) Programming results

Program does not reflect the planning of actions oriented to the promotion of regular practice (Table 2). On the other hand, the presence of information to students and relatives about possible physical-sport activities in which to participate is verified.

Table 2. Programming results

Variables	Indicators	Yes	No	Observations
Objectives	Motivate physical activity practice outside school hours.		X	The promotion of physical activity habits throughout the student's life is taken into account, but it is not explicitly reflected in its programming, since it is considered a long-term objective and is therefore not mentioned in the program.
	Act with autonomy in the practice of physical activity.		X	
	Contribute to the development of a school culture that promotes the adoption of active and healthy lifestyles.		X	
	Improve theoretical knowledge about health repercussions of the practice or absence of physical activity		X	
	Improve motor performance in both physical condition and skills.		X	
	Improve motor performance perception.		X	
	Adopt critical attitudes towards the conditions of physical activity practice.		X	
Evaluation	The evaluation of the student's physical activity is taken into account in terms of motivation, frequency and intention (verification instruments to know that students are motivated to that activity, frequency with which they practice, rubrics, self-assessment, student opinion ...)		X	It is considered difficult to assess whether the student engages in physical activity outside of school, as the situation of each student is different.
External agents	To announce among the students the possibilities of practicing physical activity in the proximities of their homes.	X		It's being applied, but it's not reflected in the program.
	Periodically inform parents about the objectives of Physical Education	X		

c) Physical education session results

In the physical education session, the presence of a greater number of indicators that encourage the regular practice of physical and sports activity take place (table 3). Reflection, student autonomy, meaningful learning and fun stand out as positive aspects. On the contrary, physical condition improvement or the level of skill in sports modalities do not appear as priority aspects.

Table 3. Class Indicators

Variables	Indicators	Yes	No	Observations
Motivation	Elements that motivate the student to the designed activity are used. Also, to motivate physical activity and physical education.	X		Importance to meaningful and emotional learning. Know the present interests of students and society.
	Elements that value the benefits of practicing physical activity and sport are present.		X	Encourage new ways of practicing present physical activity.

	Student's interests are taken into account.	X	
Autonomy	Use of strategies that allow students to act autonomously in physical activity practice.		Students are the session protagonists, taking almost all decisions in the activities. Encourage the student to choose by himself the physical activity that motivates him and not the one imposed by external agents.
Social relationships	Strategies that encourage the practice of physical activity among the students are used.		Usual practice of making students reflect on each action, to work moral values.
	It is encouraged that students find the right partners to perform physical activity together.	X	When forming teams, they do it autonomously knowing the partners with which they work better as well as managing that the group formed is heterogeneous.
	There are techniques that help students cooperate in sports.	X	Use of cooperative challenges involving everybody's participation. Set common goals in all activities.
Fun and satisfaction	Aspects like fellowship, solidarity, respect among equals are worked on.	X	
	Ludic elements are found among the activities objectives.	X	In many teaching units an objective marked is to learn enjoying and having fun. In some sessions, each group is asked to highlight a partner for their efforts.
Motor Performance	Effort made is rewarded	X	
	They are encouraged to perform a correct level of skill in some physical-sporting modalities.	X	It is not considered as the basis of physical education in primary school. However, it is work as a content and is treated, but it is not branded as a primary goal.
Information provided	Physical condition is worked so that physical activity is not perceived as a sacrifice.	X	
	Strategies that improve student's theoretical knowledge about health repercussions of the practice or absence of physical activity.	X	The activities benefits are worked through group reflections. In the dossier of each group, in the sports skills teaching units the technique is explained, but students acquire that ability through experimentation after reading it in the dossier.
	Techniques and skills used on each physical activity and sport are explained.	X	
Evaluation	Promote among students the possibilities of practicing physical activity in the surroundings of their home.	X	
	Evaluation strategies are used to test student's motivation towards sports practice. (Self-evaluation, co-evaluation ...)	X	No concrete assessment strategies are used to measure motivation towards physical activity and how often they practice it. The teacher indicates that he already knows that most students in this context practices regularly. But at the general level, self-assessment is used by asking the students what they thought about the treated DU and if it has been motivating and what have they
	When each unit is finished students are asked if they are motivated towards that physical activity and if they are going to do it outside school.	X	
	Strategies are used to check if they practice regular physical activity (questionnaire, rubrics ...)	X	

				learned.
External Agents	Promote that family environment encourages the practice of physical activity.		X	Teacher asks and values all kinds of physical activity that students do outside the center.
	Regularly inform families about the objectives of Physical Education and the physical activities that can be practiced with the students.		X	It is not considered important to incise promotion, since family environment is favorable to this issue.

d) Interview results

Interview made to the physical education teacher of the previously mentioned school is analyzed from the established categories.

Category 1. Objective and evaluation of physical activity programming.

Teacher emphasizes, in the program, the physical education adhesion. He indicates that different marked objectives lead to the great objective at the phase's end.

The main objective is to reach all my students and that they leave school with love for physical activity, knowing that it is important for their day to day, and try not to reject it.

The evaluation takes into account skill learning results, but prioritizes value acquisition.

My criteria focuses on personal and societal values that my students acquire.

Category 2. External agents.

The school is closely linked to the municipality and other schools with joint activities. Environmental resources are used and the municipality's physical and sports activities are disclosed.

We do activities from the PE seminary in Sant Cugat, sharing three times throughout primary school activities with children of the same promotion from other schools in the same town of Sant Cugat.

We use all available resources in the environment.

Category 3. Motivation and autonomy

Teacher believes that learning must be meaningful and emotional and agree with social changes. He also emphasizes that it must agree with student's interests.

... make them see that there are many options and that the option chosen is sure to be valid.

Category 4. Social relationships, fun and effort satisfaction

The teacher believes that through cooperative learning "values such as solidarity, companionship, respect between equals, empathy... are empowered" For him, it is important to reflect on the actions and movements, to make sense of them and make them attractive. Likewise, fun and satisfaction are aspects to which he attaches particular importance.

The first thing that I think should be done is to learn playing without obligation and then learn to work playing.

... if you get things effortlessly, a point will come where doing things will lose it's sense.

Category 5. Information provided by the teacher

Regarding the information that students receive about the benefits of practicing physical activity, reflection is used in the different actions performed

Through the reflections you are doing, you give meaning to why we do things and what are the benefits of doing them.

Category 6. Classroom evaluation

Evaluation instruments used do not incorporate elements that value physical activity's adherence, since the teacher does not consider it necessary. He basically uses observation instruments, self-evaluation and co-evaluation so that students can check their progress.

These are processes that occur mid-way so that they can see that the next day they can improve.

Discussion and conclusions

Based on results obtained, we can reflect on cooperative learning aspects that can facilitate the promotion of physical activity and sport regular practice habits. In the studied school, which is committed to cooperative methodology, different indicators show that

student participation and interest in physical activities of the environment are priorities, key elements for physical activity adherence, in line with what Prieto and Nistal (2009) indicate.

Within the positive aspects we emphasize that cooperative methodology used by the center's teacher complies with multiple characteristics that serve to promote physical activity and sports habits. One of the emphasized aspects is the inclusive approach and it's especially useful capacity to aware all students that physical and sports activities are within everyone's reach, as Ríos, Ruiz, and Carol (2014) affirm. Also, it has been proven that in this context motor learning is promoted, social skills are developed and enhanced, and student autonomy is favored. These aspects influence the acquisition of physical activity habits (Velázquez, Aranda, and Pastor, 2014, Goudas and Magotsiou, 2009, Fraile and De Diego, 2006).

Another key element is the environment resources relationship and other school relationships in proposals for joint activities. Cooperative learning can facilitate this type of experience as indicated by Fernández-Rio (2003).

Contributions of this study are based on the cooperative learning factor analysis that contribute to the promotion of regular habits autonomy, social relationships, information provided, external agents, evaluation, fun and satisfaction. The variables and indicators table designed can also be considered as a contribution, since it has been shown as a useful tool to be used by schools in checking the quality of actions that promote regular physical activity and sport practice.

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