
ENSINO DOS ESPORTES COLETIVOS DE INVASÃO NO AMBIENTE ESCOLAR: DA TEORIA À PRÁTICA NA PERSPECTIVA DE UM MODELO HÍBRIDO

TEACHING INVASIVE TEAM SPORTS IN THE SCHOOL ENVIRONMENT: FROM THEORY TO PRACTICE FROM THE PERSPECTIVE OF A HYBRID MODEL

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RESUMO

Este estudo teve como objetivo estruturar e desenvolver um programa de intervenção do ensino dos esportes coletivos de invasão (futsal, basquetebol e handebol) nas aulas de Educação Física por meio de um modelo híbrido de ensino. Participaram da investigação duas turmas do ensino fundamental (6º e 7º ano) de uma escola pública do estado do Paraná. O processo de intervenção pedagógica foi realizado após a elaboração do planejamento das unidades didáticas, tendo como referência os princípios do Modelo Desenvolvimentista (MD) e do Modelo de Educação Desportiva (MED), denominado de modelo híbrido. As aulas foram fotografadas e filmadas e as unidades didáticas foram previamente estruturadas a partir de lógica de dificuldade crescente. A análise dos dados considerou as informações do diário de campo e as imagens das aulas (fotografia e filmagem), por meio de narrativa pessoal e códigos de análise. As evidências demonstraram que o modelo híbrido de ensino (MD-MED) pode ser viável na realidade investigada apesar das dificuldades estruturais encontradas, compreendendo uma importante alternativa aos modelos tradicionais de ensino dos esportes coletivos.

Palavras-chave: Pedagogia. Escola. Esporte.

ABSTRACT

The objective of the present study was to structure and apply a teaching intervention program of invasive team sports (futsal, basketball and handball) in physical education classes using a hybrid educational model. Two public elementary school classes (6th and 7th grades) in the state of Paraná participated in the investigation. The process of pedagogic intervention was applied after preparing a plan of teaching units using as reference the principles of the Developmental Model (DM) and Sport Education Model (SEM), denoted hybrid model. Classes were photographed and filmed and the teaching units were previously structured based on increasing logic difficulty. Data analysis was based on field information and class images (photography and filming) using personal narrative and analysis codes. The evidence showed that the hybrid educational model (DM-SEM) may be feasible for the reality investigated despite the structural difficulties, representing an important alternative to traditional teaching models of team sports.

Keywords: Education. School. Sport.

Introduction

The theoretical essay “O ensino da técnica e da tática: novas abordagens metodológicas” (The teaching of technique and tactics: new methodological approaches)¹ published in 2004 presented some reflections about the methods for the teaching of team sports and characterized the main theoretical models proposed by the scientific community for the teaching of technique and tactics. Despite the long time since its publication, it would be premature to state that the systematization of the work of authors of national and international renown has reached the Brazilian educational reality. Indeed, studies published in scientific journals have been often criticized for excessive theorization and mainly for failing to reach the educational reality². In addition, some of the statements presented in the cited paper at the time could be still repeated, restated, re-evaluated and investigated as if they had been written today:

Although the training of Physical Education professionals has changed significantly over the last few years, it is essential to reaffirm that many of the studies conducted on the methodologies and pedagogic actions used today by teachers continue to contemplate the teaching of sports using the traditional approach. The need to counter “tradition” with “innovation” demands critical and reflexive thinking on the part of the professionals, requiring effort, dedication and continuous training^{1,49}.

Although the concern of the present study is not to discuss aspects of the initial and continued training in the area of Physical Education, it should be pointed out that, in the Brazilian reality, schools continue to face the same problems in the most diverse settings, often resulting from the weaknesses of the initial training, from the scarce initiatives of continued teacher training, and from the problems related to the teaching profession. Over the last decades, investigations of the pedagogic practice of Physical Education teachers have pointed out the lack of student motivation^{3,4}, the contents of the classes and the difficulties in their implementation⁵⁻⁷, the deficient sports facilities and their relation to pedagogic practice⁸, the difficulties of pedagogic action in sport^{9,10}, and the training of the teachers^{11,12}.

On this basis, in order to strengthen the process of structuring of sport contents in the school setting and to overcome the theoretical perspectives previously presented¹, we carried out a program of intervention in elementary education using the Developmental Model (DM) of task structuring¹³ and the Sport Education Model (SEM)¹⁴. In these models of sport teaching, the antagonism between direct instruction and the ecological aspect has not prevented the adoption of a hybrid model of pedagogic intervention by recognizing that both models involve the concern of the teacher in encouraging the effective participation of all students, and that the ability to play is developed by improving specific skills (teaching of technique) and by stimulating the decision making process (teaching of tactics)^{15,16}. The DM for the teaching of sport games was elaborated by Judith Rink in the 1990's and released in several countries¹⁷. The model recommends the progression of tasks didactically treated by the teacher. The SEM, on the other hand, advocates the educational potential, seeking the training of students that can understand the meaning of the game, providing opportunities for the practice of sport modalities and for the affective aspects demonstrated in each practice^{14,18-20}. In this model, the students are the center of the teaching process, performing tasks as a team in order to develop the feeling of belonging and playing various roles (players, referees, journalists, and leaders) during the classes and in festivals held at the end of each content or bimester.

Regardless of the nature of the problems faced, studies have demonstrated that the concern about pointing out theoretically the advances of the methodologies of sports teaching^{1,21-24} was not sufficient to lead to the implementation of new forms of sports teaching in the school setting. This drawback was demonstrated in the implementation of structured programs of sports teaching using alternative teaching models such as the DM¹³ and SEM¹⁴ applied in the present investigation.

In the DM, the appreciation of the structuring of the instruction process and the didactic treatment of the tasks are of fundamental importance for the students to acquire new motor skills¹³. On the other hand, in the SEM the main objective of the teaching and learning process is the investment in the educational potential of sport in the school and in the training of sportingly competent, educated and enthusiastic students^{14,20}.

Thus, the objective of the present study was to develop a program of intervention in the teaching of invasive team sport (futsal, basketball and handball) in Physical Education classes using a hybrid teaching method, specifically DM and SEM. The intention was to

obtain a better visualization of practical solutions and methodological strategies for the problems faced during pedagogic practice.

Methodological Procedures

The intervention program was applied to 11-to-14-year-old students enrolled in two grades of elementary school (6th grade, n=26 students; 7th grade, n=23 students) of a public school in the state of Paraná. The school participated voluntarily and the choice of groups was random, with the program being applied during the hours of Physical Education. Forty-five classes of 50 minutes each were held, 16 of them devoted to futsal, 14 to basketball, 14 to handball, and 1 to final evaluation. Investigators currently believe that longitudinal studies are necessary, and various studies have suggested hybrid teaching models using more than 20 classes²⁵⁻²⁷. The classes were filmed and photographed in order to guarantee the possibility of later analysis, permitting reliability of the study. In addition, the permanence in the school setting for two bimesters in order to learn about the subjective aspects of the context aimed to guarantee the reliability of the investigation.

The persons responsible for the participants gave written informed consent after being informed about the possible risks of the activities carried out and about the process of photography and filming of the classes. The study was approved by the Ethics Committee for Research on Human Beings (Protocol No. 236.092).

In order to provide a privileged view of the educational scenario²⁸, the intervention program was applied during the first semester of 2013 by one of the investigators using action research, with the investigator simultaneously acting as the teacher in the Physical Education classes. Action research permits to overcome the gaps between theory (research within the school context) and teaching practice, permitting the understanding of teachers and of their practices²⁹.

The teaching units (futsal, basketball and handball) were prepared based on the assumptions of the DM¹³ and the SEM¹⁴, with duly structured class objectives (motor, cognitive and affective domains) and with the tasks previously arranged schematically using a logic of increasing difficulty. It was not necessary to go through the stages in a sequential manner, with the teacher being responsible for the teaching organization of the contents by reflecting about the teaching-learning process¹³.

The futsal, basketball and handball modalities were chosen because these are sports considered to be traditional in the reality investigated, in addition to having similar pedagogic characteristics (invasive team sports). The organization of the tasks was based on the progression of exercise stages used in the DM (Table 1) and in the SEM (Table 2). The use of the hybrid model was the basis for the class plans prepared according to the teaching units. However, the principal investigator and her collaborators performed the sequential organization based on their experience within the school context and on higher education.

Table 1. Stages of exercise progression.

<p>Stage 1 – Type 1 Exercise (simple skills without opposition/markings) Involves individually performed skills Ability to control an object (ball, racquet) Actions – directing an object to a place with quality (force, level and direction) in a consistent manner while stopped or moving. Receiving actions– obtaining possession of the object by moving towards it from any level, direction or velocity, while stopped or moving.</p>
<p>Stage 2 – Type 2 Exercise (a combination of skills without opposition/markings) Combined skills Movements performed in a cooperative manner.</p>
<p>Stage 3 – Type 3 Exercise (situations of simplified opposition) Basic defense and attack strategies.</p>
<p>Stage 4 – Type 4 Exercise (practice similar to a formal game) Modification of the games with changes in rules, limits, number of players and specialized positions Complete game</p>

Source: Adapted from Rink¹³.

Thus, the class plans for the 6th and 7th grades were prepared according to the assumptions of the DM for the execution of stages of exercise progression in the teaching and learning process: 1) to permit the evolution of the motor performance of the students; 2) to provide maximum activity to all students regardless of their skill level; 3) to be appropriate for the level of experience of the students, and 4) to integrate the motor, cognitive and affective aspects with the educational objectives (Table 1). For the implementation of the SEM, we used activities and methodological procedures that would appreciate the affiliation of team members, the differentiation of students' roles, the principles of cooperation and responsibility, and the benefits of culminating events at the end of each thematic unit (Table 2).

Table 2. Thematic units for the teaching of invasive team sports (futsal, basketball and handball) using the Sport Education Model (SEM).

Thematic Unit: Futsal	Thematic Unit: Basketball	Thematic Unit: Handball
<ul style="list-style-type: none"> - Introduction to the Physical Education discipline - Getting to know the students and team organization - Introduction to the rules of team work <ul style="list-style-type: none"> - Responsibility when performing the tasks - Construction of a bulletin board - Organization of the “roles” of the students - Preparation of the regulation of the culminating event with guidance - Preparation of the “battle cry” of the team <ul style="list-style-type: none"> - Discussion of fair play - Culminating Event (3x3) and delivery of certificates 	<ul style="list-style-type: none"> - Team organization by the students themselves with teacher’s guidance <ul style="list-style-type: none"> - Introduction to the rules of team work - Responsibility when performing the tasks - Construction of advertising posters; <ul style="list-style-type: none"> - Organization of the “roles” - Preparation of the regulation of the culminating event with supervision <ul style="list-style-type: none"> - Discussion of fair play - Culminating event (2X2) and delivery of certificates 	<ul style="list-style-type: none"> - Team organization by the students themselves with teacher’s supervision <ul style="list-style-type: none"> - Introduction to the rules of team work - Responsibility and cooperation; <ul style="list-style-type: none"> - Organization of the “roles” - Preparation of the regulation of the culminating event <ul style="list-style-type: none"> - Final evaluation - Culminating event (3X3) and delivery of certificates

Source: The authors.

Although task organization was closely similar for all modalities, there were differences in the aspects related to the technique and tactics of each sport, with differentiation between the 6th grade and 7th grade (Table 3).

Table 3. Content organization (invasive team sports) for the program of pedagogic intervention in 6th and 7th grades in a school of the state educational network.

Series	Motor	Cognitive	Affective
6th grade	<ul style="list-style-type: none"> - Developmental Games Level II - Skill with the ball (basics: a) futsal: dribbling, passing/receiving and shooting; b) basketball: dribbling, passing and throwing; c) handball: dribbling, passing and throwing) - Simplified opposition task (1X0, 2X1 and 3X2) - Tasks similar to those of formal games (1X1, 2X2 and 3X3) - Culminating event: futsal trio, basketball duo and handball trio 	<ul style="list-style-type: none"> - Characteristics of team sports - Attack and defense (directives) - Numerical equality - Initial concepts of numerical inferiority and superiority - Tactic decision making 	<ul style="list-style-type: none"> - Cooperation - Self-concept - Respect - Responsibility - Socialization - Self-esteem
7th grade	<ul style="list-style-type: none"> - Games Development level II (major games) - Skill with the ball); (Basics: a) futsal: dribbling, passing and shooting; b) basketball: dribbling, passing and throwing (tray); c) handball: dribbling, passing and throwing with progression) - Simplified opposition tasks (1X1, 1X1 (+1), 3X2 and 4X3) - Tasks similar to those of formal games (3X3, 4X4 and 5X5 in handball) - Culminating event: futsal trio, basketball duo and handball trio 	<ul style="list-style-type: none"> - Characteristics of team sports - Attack (offensive movements; joker's role, exchange of passes) - Defense (introduction to individual marking) - Positioning in numerical inferiority and superiority - Tactic decision making - Differences and similarities of invasive sports 	<ul style="list-style-type: none"> - Cooperation - Self-concept - Respect - Responsibility - Socialization - Self-esteem

Source: The authors.

In the analysis of qualitative data, we considered the field diaries, the class images (photography and filming), and informal student depositions (triangulation of the data). In each class, observations and informal dialogues were recorded in field diaries by means of personal narrative, i.e., by means of told stories that permit to understand the holistic experience of human beings, performing the historical reconstitution of the reality in which the investigator inserted himself³⁰.

The field diaries were written during the program of pedagogic intervention in order to record the information for each class. The records contained events and situations considered relevant and noted by the investigator at the end of each class and after image capture (photographs and films). For data analysis, analytical codes were used to mark the themes by comparing the data, looking for similarities, relationships and differences³¹ according to the following steps: learning the data, noting down the initial ideas; (2) obtaining the initial codes with a nomenclature that might contribute to the formation of the first themes; (3) searching for new themes, gathering the relevant data for each one of them; (4) revision of the themes or their grouping into other thematics; (5) definition and naming of the themes according to the theoretical foundation of the study; (6) preparation of the final report using available literature to discuss the data.

In the initial phase of analysis (learning the data), the following initial codes were established: planning, culminating event, motivation, respect, affective ties, didactic organization, and evaluation. After a detailed analysis of the themes and their assignments to new theme groups, other emerging themes used in data presentation and study discussion were designated: a) the first meetings in the school reality; b) application of teaching models, and c) execution of the culminating event.

Results and Discussion

The first meetings in the reality of the school

The first meetings with the students were held in order to explain the program of intervention and guidance regarding the activities proposed. The two subsequent weeks were a period of examination of the school reality, with many difficulties encountered regarding divergences between the interests of the school and those of the investigators. The school participating in the study, although located close to the downtown area (a distance of approximately 2 km), is mainly frequented by students from the periphery, with only 7 participating students having attended a private school in the year preceding the study and with approximately 60% of the students depending on public transportation in order to attend school activities.

One of the difficulties faced by the investigators was due to the fact that extracurricular school activities such as preparation of notices, meetings and presentations were often carried out during the hours of Physical Education classes, hindering compliance with the planning of classes (Table 4). However, the opportunity of using the classrooms of other teachers who had not appeared during their class hours permitted the investigators to teach all the classes.

Table 4. Characteristics of the first meetings and their consequences for the teaching and learning process.

	Characteristics	Consequences
Approximation to the school reality and first meetings with the students	Divergence between the interests of the investigators and those of the school	Difficulty in complying with planning
	Approaching the students and learning about their interests and necessities	Recognizing the lack of appreciation of sport practice by 7th grade students
	Stimulation of participation in the class	Understanding the long and exhausting process of stimulating participation\
	Recognizing the students by name	Improved affective ties
	Lack of sport materials	Looking for donations in order to implement the teaching models

Source: The authors.

Getting to know the students and their interests was a challenge faced in the first month of classes. The 7th grade students already had certain expectations about Physical Education classes because of the knowledge acquired in the previous year. Many only wanted “to play ball” and some did not like Physical Education classes and would have been more satisfied if allowed not to perform physical activity (Table 4). Two of these students were older than the age range of their classmates because of accumulated grade repetitions. Despite their older age, they had difficulty in performing the tasks proposed and did not show motivation during the first classes. Some studies have pointed out that lack of motivation has been a prominent feature in Physical Education classes^{3,4}. In this respect, one of the major misconceptions in the teaching of sports is to believe that sports are very easy to teach and are an interesting activity for all students¹⁵. Thus, it is necessary to understand that stimulating student practice during Physical Education classes is a long and exhausting process for the teacher (Table 4).

During the first weeks it was important to create an affective tie with the students. All the tasks were first explained with an evaluation sheet for each activity. During the second week, the students were instructed to prepare explanatory posters about team sports, differentiating them from individual sports. The students were stimulated to create a title for their posters, but most of the study groups had difficulty and required a lot of stimulation, especially at the time of presentation of the material prepared.

Some points are essential for the success of group work: group organization and preparation, the development of specific competence for group work and preparation on the part of the teacher for the organization of the tasks to be performed³². In order to create the necessary affective ties at the beginning of the teaching and learning process, the teacher made a point of recognizing the students by name, arriving before the beginning of classes, being present during recess, and carrying out informal activities with the students (Table 4).

It was only at the end of the first teaching unit (futsal) that these ties were strengthened. At that time, the teacher-investigator already knew most of the students by name and the activities were being performed with more success, although some 7th grade students were still unwilling to participate in the classes. Some were late for the first classes and even isolated themselves in other places. When they were identified, initiatives of approximation and individual conversations were important to ensure their participation in the classes (Table 4). When the second didactic unit (basketball) was started, all students were already participating in the classes. It should be pointed out that many students did not participate in futsal classes because of lack of involvement in school activities. This problem was overcome with a dialogue with the parents and teachers and with school supervision after the first weeks of class, when the teacher was aware of the reality in which she was situated and was able to recognize all the students of the various groups.

Some reflections indicated the current situation of Physical Education: “[...] If it was difficult to create affective ties with students when teaching classes to two groups, what about the teachers who taught fifteen or more classes. But this did not discourage me [...]” (field diary– week 8).

An increased number and duration of classes in order to favor the learning of sports has been pointed out as an urgent necessity in the investigations conducted, mainly using constructivist approaches such as the SEM, in which the strategies are diversified and require a considerable time for the understanding and resolution of the tactical problems arising during sport games, improving the understanding of the students and favoring the affective ties¹⁶.

Other difficulties were detected before the intervention process: the lack of pedagogic material and structural problems. The organization of materials is a determinant factor in Physical Education classes. In the Brazilian reality, public schools in general have made fewer investments than private schools⁸. In the present study, a closet with a key was made available to store the pedagogic material acquired through donations for the investigation (Table 4).

Application of the teaching models (DM-SEM)

In addition to progression, the learning tasks provided the opportunity to refine and apply the skills in order to improve the playing ability of the students. The tasks were arranged in four stages of increasing complexity, as shown in Table 1. While progression is defined as the possibility of performing tasks of gradually increasing difficulty, refinement requires the improvement of motor responses on the part of the students, as well as improved critical analysis of the game situation. In practice, tasks are selected that may be used in the context of the game itself in order to favor an increase in decision making (Table 5). According to Tavares and Casanova³³, the students should learn skills in partnership with their teammates and opponents in order to understand at what point each technical foundation will be utilized and applied to the context of the game.

Table 5. Characteristics of the application of the hybrid teaching model (DM-SEM) and its benefits in the teaching and learning process.

Application of the hybrid teaching model (DM-SEM) and its benefits	Characteristics of the DM-SEM	Benefits
	Progression of the learning tasks	Didactic organization
	Refinement tasks	Improved playing ability and decision making
	Participation of the teacher in the activities	Increased motivation
	Establishment of goals and criteria of success	Increased student participation
	Execution of tasks of numerical superiority and inferiority	Improved movement and tactical understanding
	Task execution with the presence of the joker	Understanding the task and the offensive tactical action
	Execution of the culminating events	Effective participation in different roles (player, referee, journalist, photographer)

Source: The authors.

Some students had great difficulty in performing movements that required body control. Thus, the participation of the teacher in the practical activities of the students during the execution of the tasks intended to motivate the students with great motor difficulty, permitting their participation and also encouraging their demonstration since the perception of competence and the preparation in order to learn new movements facilitate the learning of motor skills³⁴. On the other hand, the execution of tasks and the participation in handball games were facilitated by the fact that the students were able to hold the ball. After 17 weeks of intervention, the students showed less difficulty in organizing and executing the activities and successfully performed the more complex tasks.

Regarding the activity of ball control (Type 1 – 1X0) in the futsal modality, it could be seen that most children had difficulty in performing the tasks. The groups were heterogeneous and some students felt unmotivated by the easy execution of this task. It was necessary to establish differentiated goals according to the level of ability of each student. During the passing tasks (Type 1 – 2X0), criteria of success were established (establishment of the number of passes per time and the execution of consecutive passes) in order to facilitate the participation of the students who showed greater facility of execution (Table 5).

When the level of motivation for the execution of the tasks was very low, efforts were made to change the motivational strategies, with the proposed activities being occasionally modified. In addition, the adoption of goals and criteria of success¹⁵ in situations similar to the formal game facilitated the teaching and learning process of the sport. Although the students demonstrated that they liked Physical Education classes, the activities that did not have a well-elaborated criterion of success became monotonous.

When the tasks involved a lot of movement the difficulties were even greater, especially because of lack of ball control and of body control. The difficulties and mistakes are important and should be part of the learning process as long as the teachers are able to identify them so that the students may progress throughout the process³⁵. An important aspect is that, by executing the tasks, the students also familiarized themselves with the rules of the modality and gained autonomy for group work, avoiding the exclusion of less skilled colleagues.

After the first weeks, the SEM was starting to gain shape: the students started to occupy a central position in the teaching and learning process, deciding which teams would participate in the culminating event (sport tournament) and choosing who should be the journalists, referees and photographers during the event. All students participated as players

and organized the play time of each one so that all could participate for equal periods of time (Table 5).

In basketball, simple skills without opposition (Type 1) and combined skills (Type 2) were executed with the effective participation of all students. The fact that the level of knowledge of the modality was very low among all students did not cause difficulties in the classes. In addition, the greater experience of the teacher with the basketball modality facilitated the choice of tasks according to the learning level of the students. The experience of the teachers with given contents (knowledge of content) facilitates the teaching and learning process when allied to the pedagogic knowledge of the content³⁶.

Regarding the feedback performed during the classes, the introduction of tasks involving numerical superiority (2X1) in futsal required various demonstrations on the part of the investigator. The court was marked with chalk, the goals were adapted with cones and the defender students wore a vest to differentiate themselves from the attackers. After the first attempts, some targets were established (success criteria) such as the number of passes before attempting the goal and the number of touches on the ball. The size of the space used was increased progressively. In basketball, 2X1 games were started with adapted targets (arches and cones), stimulating feints as an important element for passing. In these activities, the students also applied some rules of the modality.

Sixth grade students had great difficulty in executing the tasks of numerical superiority using half a court (Type 4). This problem required the teacher to change the form of organization of these tasks, which then were performed after organization of the movements, with the students “training” without the ball before the exercise in a step-by-step manner.

One of the pedagogic strategies was the explanation of the movements of the activity on a blackboard taken to the field by the investigator. In addition, before presenting the content for the activity of numerical equality, it was necessary to perform again passing tasks (2X0 – Type 1) as motivating targets so that the students would make an effort to execute correctly the basic activity.

When performing tasks with the same dynamics in the modalities of basketball and handball, the students who were more familiar with the tasks already performed in the first teaching unit (futsal) showed greater facility in execution despite the lack of specific knowledge of these modalities. Seventh grade students showed greater facility in understanding the tasks, but the criteria of success increased the level of involvement in the activity.

Task execution in the 2X2 situation (Type 4) in futsal was even more complex, requiring greater motor skill, ball control, and body control. To receive the ball, the students should know how to move in order not to be marked since the defensive attitude was highly motivated by the recovery of the ball and consequently by the change in position. To facilitate this process, the intention was to perform simpler tasks with 2 attackers and only one defender, i.e., 1X1 (+1), denoted “joker play”²³. The joker role initially belonged to the teacher in order to facilitate the tactical understanding of the exercise (Table 5). By using a hybrid model, the investigators observed that the students were able to understand and appreciate the main tactical concepts that are important for learning a sport²⁶.

Tasks were performed in all modalities so that the students would learn to move in order to receive the ball by executing feints in such a way as to prevent the opponent from marking. The execution of these tasks required the organization of the students in columns or lines and was facilitated by the experience already acquired with similar tasks while learning futsal. However, it needed intensive participation by the teacher in order to define the roles of

each student. To facilitate receiving the ball by the students, 2X2 (+1) tasks, denoted functional structures², were performed with the teacher playing the joker role.

Importance of the culminating events

At the end of each teaching unit, a culminating event was held involving the participation of the students of each grade, as proposed by the SEM (Table 6). All teams played with each other and the games were held during the class itself. Since the competitive nature of team sports is seen with a preconceived notion by generating “winners” and “losers”, it is necessary to have a pedagogic concern regarding the fact that the same students should not always be the winners or the losers³⁶.

Table 6. Characteristics of the culminating events held in the hybrid teaching model (DM-SEM) and their benefits in the teaching and learning process.

	Characteristics	Benefits
Culminating events (futsal, basketball and handball tournaments)	Organization of work teams with the collaboration of the teacher	Organization, reduction of conflicts and increased affective ties
	Preparation of the regulations of the first culminating event (futsal)	Divergent opinions, effective participation in the activities and improvement of the learning climate
	Playing different roles (player, referee, photographer and journalist)	Cooperation and teamwork
	Tasks and theoretical work related to the events (parody, posters, programming and advertising)	Improvement of the learning climate and of student relations
	Preparation of the regulations by the students themselves	Team decisions and effective participation
	Awards (certificates for everybody)	Increased personal value

Source: The authors.

The first culminating event, the futsal tournament, was fundamental for the improvement of learning and motivation among the students. The shared responsibilities and the work devoted to the culminating event resulted in greater closeness among the students, who became more friendly with one another. During recess, many presented their doubts to the teacher, asked questions about the contents and shared personal problems. The success of team work and the social involvement in the teaching of sports characterized the organization of the teacher within the contest of the classroom, in the interactions among students and in the planning of classes, favoring the learning climate³⁶ (Table 6). Thus, the culminating events motivated the students to prepare themselves for the activities, with a group of students actually meeting in order to learn other details of the modalities, a fact that also improved the relationship between peers.

Other activities were performed during the culminating events: the students photographed, participated in game refereeing, and prepared parodies with the thematic (name) of their teams. In all culminating events, certificates were delivered to all participants, including those who had not wanted to participate as players on some occasions, but had opted to collaborate with other functions. Appreciation of student autonomy when choosing if they preferred to participate in other function in some of the games was necessary as a requirement of the teaching models used (Table 6).

In the basketball and handball tournaments, due to the difficulties of the students, the culminating events were held in duos and trios, respectively, both in 6th and 7th grades. The students participated assiduously in referee activities, collaborating during the classes. The participation as referees in the game was a way for the students to demonstrate that they were understanding the rules of the modality, previously ignored by all of them. Team work was

one of the concerns guiding the pedagogic intervention in the teaching of sports, leading to the use of group dynamics, communication processes, social interaction, and team organization.

When organizing the groups for the basketball and handball tournaments, the students met with some difficulties, requiring stimulation and pedagogic support so that the process would occur in an appropriate manner and without conflict. In general, it could be seen that the students were quite satisfied by being allowed to choose their own work groups. The students were first stimulated to meet in small groups and then to present their suggestions for the preparation of the culminating events. Studies conducted with the SEM have revealed the importance of this model regarding student inclusion, permitting the students to take on responsibility for the teaching and learning process in a gradual manner, leading to autonomy within the educational context²⁰.

Although the proposal implemented here increases the autonomy of the students, there were divergent opinions and the management and organization of the pedagogic work by the teacher were physically and emotionally exhausting. However, the participation in the elaboration of the activities increased the expectations of the task, resulting in effective and motivated participation in all the activities.

Final considerations

The investigation of the implementation of a program of pedagogic intervention in the school environment was a challenging initiative, mainly because of the structural and material problems frequently faced in the state public school network. However, despite the difficulties encountered, the investigation was important by demonstrating the possibility of implementing teaching models that may favor the teaching and learning processes related to invasive team sports in the school setting, in addition to the theoretical evidence previously pointed out.

Although the nature of the present investigation does not permit generalization of the findings, the evidence obtained is of help for the understanding of the complexity of the act of teaching and for the overcoming of traditional methods for the teaching of sports, which in most cases do not favor movement in the execution of tasks during Physical Education classes. The adoption of the hybrid teaching method combining the principles of the DM and the SEM is viable and promising for the reality investigated. The evidence also indicates that this is an important alternative to the remaining models traditionally employed in the teaching of cooperation and opposition sports.

The application of these models to the reality investigated may be initially physically exhausting for the teachers, especially considering that the number of classes they teach in their activities is much higher than that taught in the present investigation. However, as is the case for all pedagogic processes, the initial difficulties are overcome when the students become involved and participate in the classes. On the other hand, the working conditions of the teachers should be improved, especially in terms of the physical and material structure necessary for Physical Education classes.

The affective tie was an important aspect ensuring the development of pedagogic work. With each class taught, the actions performed favored the desired closeness in the student-teacher and student-student relationship, facilitating the execution of the tasks and the achievement of the goals proposed. In addition to increasing the level of understanding of the students regarding the act of playing, the pedagogic proposal implemented here provided the

opportunity of participation for all students, including those who at first showed lack of interest and motor difficulties.

Among the limitations of the study, we point out that the participants were from only one state school, whereas the cultural influences of other regions or of private schools might yield different results during the investigation. The students studied here did not possess a school culture of pedagogic work with team sports, a fact that caused difficulties during the first weeks of classes. Thus, we recommend to replicate the study in other settings in which a structured program with the teaching of team sports is already underway.

Continued investigation of this theme contemplating the remaining teaching levels is also recommended. By complementing the study conducted on 6th and 7th grade classes we look for a better visualization of practical solutions and of methodological strategies for the problems faced during pedagogic practice.

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