Análisis del Ultimate Frisbee en Educación Primaria a través del Modelo de Educación Deportiva

Analysis of Ultimate Frisbee in Primary Education through the Sports Education Model

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Abstract:
Physical Education (PE) teachers can positively influence students’ overall development through their teaching activities, achieving a more physically active youth society that adopts healthy lifestyle habits and has a more supportive attitude towards their peers, teachers and families. This study aims to develop a didactic proposal in PE for Ultimate Frisbee through the Sports Education Model (SEM). The intervention is designed for 80 students in the 5th year of Primary Education, aged 10 and 11 years, who belong to four schools in Cáceres. For this purpose, a learning situation has been designed comprising a total of 9 classes, which will be carried out by the timetable of the SEM. In addition, given the characteristics of the pedagogical model, students will be given sufficient autonomy to be the protagonists of their learning. With this didactic proposal, it is expected that students will increase their motivation levels, participate actively during PE classes, become involved both behaviorally and emotionally and improve their perception of the subject and the practice of physical activity (PA) in their free time.

Keywords:
Students, Physical Education, pedagogical model, autonomy.

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Martínez-Álvarez (2000) and Torrebadella-Flix (2017) deduced that there was a general undervaluation trend towards the subject of Physical Education (PE). This was due to initial conceptual uncertainties and curricular contradictions. Therefore, it is necessary to raise awareness of the true purpose and objectives of this area of education. Kirk (2005) identified PE as a major subject in the overall educational development of school-age students. You just have to pay a little attention to verify that the continuous practice of physical activity (PA) is beneficial for physical, cognitive and social development in the stage known as childhood. Due to this, it is necessary for the continuous recycling of pedagogical models, methodologies, and educational resources that are used to teach this subject in schools to help students to become interested in the practice of PA and stop to see the subject of PE as unnecessary.

The results obtained through the Perseo Program (2007) determine that it is necessary to practice PA at school age, not only to reduce body fat, improve muscle strength and endurance, reduce the chances of suffering anxiety, positively develop physical self-concept, among other benefits, but it is also a key factor to improve behavior in different areas of life and relationships with other peers. If attention is paid to the benefits mentioned, both by the Perseo Programme (2007) and by Kirk (2005), which brings PA to school-age students, it can be observed that the positive development of the essential values that a human being must possess for his cognitive and social development is also implicitly included, this will be analyzed later. The reflections of these authors lead to think about the need to make several changes regarding the way of teaching the area of PE to meet their true objectives. This renewal began through the incorporation of teaching strategies and styles (Martínez, 2013; Mosston & Ashworth, 2002). From this new perspective, so-called “teaching models” began to emerge (Fielder, 1973; Martínez, 2013). After the “teaching models” appeared, the so-called “curricular models”, the “instructional models” and, finally, the “pedagogical models” gradually burst in.

Metzler (2005, 2017) determined that a teaching model is based on the joint idea of different learning theories, various topics, structures, class control strategies, evaluation of all aspects and learning strategies and styles. As expressed by Metzler (2005, 2017) among other authors, the way of imparting the area of PE has evolved from the point of view that takes the teacher as the most important factor in the process of learning to the perspective that considers students as the real protagonists of this process and focuses on enhancing their learning and the acquisition of values and attitudes necessary for their life. Indeed, knowledge and research on teaching methods have been increasing over time, thus achieving scientific and practical knowledge that greatly helps to improve the quality of the intervention of the PE teacher. Fernández-Rio et al. (2016) collect the most well-known pedagogical models that are currently used in PE, for this they classify them into two types: (1) Basic pedagogical models: Cooperative Learning (Fernández-Río & Méndez-Giménez, 2014; Johnson & Johnson, 1994), Sports Education Model (SEM, Siedentop, 1994; Siendetop et al., 2019), Teaching Games for Understanding (TGfU; Bunker & Thorpe, 1982; Lodewyk, 2015) and Personal and Social Responsibility (Gordon & Doyle, 2015; Helisson, 1990) (2) Emerging pedagogical models: Adventure Education (Hattie et al., 1997) Physical Literacy (Almond & Whitehead, 2012; Whitehead, 2010), Attitudinal Style (Pérez-Pueyo, 2016), Ludotechnical Model (Valero & Conde, 2003) Self-construction of materials (Fernández-Río & Méndez-Giménez, 2014) and Health Education (Aguarales et al., 2015; Haerens et al., 2011).
The didactic proposal that has been designed is based on the pedagogical model of SEM because it offers the appropriate structure so that students can develop physical and social skills and acquire important values for their present and future.

**Sports Educational Model**

Siedentop (1994) and Siedentop et al. (2019) define SEM as a curriculum way of teaching that arises to stimulate, during PE classes, authentic sports practice experiences. These experiences allow all students to have the same opportunities. Siedentop, with the proposal of this pedagogical model, sought to give a turn to PE classes. Gutiérrez-Díaz and García-López (2008) argue that the basic concept is that the sports experience of children, outside of school, is greater than the sports experiences in school. On the one hand, there is the environment outside the school in which students have the opportunity to know the different phases of the season of a competition of a certain sport (preseason, season and finals), the different roles that exist within this environment (players, coaches, referees...), the periodic dynamics of training and the different types of environments that can occur. On the other hand, the school's environment, in which everything is reduced to learning tasks, which usually require high technical practice and a game. Therefore, and as defended by Siedentop et al. (2019), the fundamental objective of this model is to educate students to be players in its broadest sense and help them develop as athletes competent, trained, and enthusiastic. It is important to note that “Sports Education employs small learning groups throughout the season, called teams, and has been described as student-centred learning” (Alexander et al., 1998, p.94). The fundamental aspects of SEM indicated by Siedentop et al. (2019) are: (1) Season. The didactic unit that is organized by applying this type of pedagogy must be considered as a sports season, which will have to cover a considerable number of sessions (minimum eight sessions and maximum fourteen sessions). Fernández-Río et al. (2016) defend that this season is divided into four phases: (a) Practice phase organized by the teacher, who directs the class through direct instruction and assignment of tasks for approximately three or four sessions; (b) Autonomous student practice phase, where students work independently in groups and assume the roles designated above. This phase has an approximate duration of five or six sessions; (c) Official competition phase, where students apply the skills acquired in the previous phases, usually this phase is developed in one or two sessions; and (d) Final recognition or celebration phase, time that is used to recognize and reward the skills learned during the rest of phases. To this end, different learning activities are organized and diplomas are awarded. This phase only lasts one session. (2) Affiliation. This aspect is one of the most important in Sport Education. At the beginning of the didactic unit, the students are distributed into different teams that will remain fixed during all the sessions that the teaching unit lasts. Teams must be created in a heterogeneous way in terms of different traits such as gender or skill level. In addition, it is important to stimulate the feeling of belonging to a team, this can be done by encouraging students to choose the team’s name, the motto, create a shield, anthem or any element with which the members of the team feel identified, distinguish themselves from the other teams and strengthen their ties. (3) Official competition. In the calendar of the season will be distributed different matches, that do not last long, between the different teams formed at the beginning of the didactic unit. With the establishment of different official matches, students will be better organized and aware of the improvements that each component of
the team has, this will motivate them not to lose interest in the sport that is practised and will enjoy the complete practice of physical activity. (4) Data recording. It is necessary to record scores, attitudes, training, or any other element that is essential to dynamize the structure of the pedagogical model of Sport Education. It is important not to reserve points only for matches but should be rewarded based on more factors such as positive attitudes, display of values, originality when naming the team, and fair play...This is intended so that all teams can get points even though they do not win many games, so all students will retain interest and motivation during the development of the entire teaching unit. (5) Final event. The tournaments of various sports disciplines end with a grand final or cohabitation in which teams come back together to compete, deliver prizes or diplomas and enjoy the sport and the relationships created both with their teammates as with the rest of the groups, apart from the results obtained in the competition. (6) Festivity. Every sport has followed an atmosphere and festive spirit and fun, it is this atmosphere that motivates, makes enjoy and unites the players involved with the followers of this sport. All students must have a good time and be entertained.

In addition to the previous fundamental aspects by which the pedagogical model of Sports Education is characterized, there are other features that according to authors such as Siedentop et al. (2019), Fernández-Río et al. (2018), Martínez (2013), and Wallhead and O’Sullivan (2005), are essential to carry out the model to perfection: (a) Adaptation to practice: the activities planned in the development of the didactic unit in which the SEM will be put into practice must be adequately adjusted to the skills and knowledge that all students possess; (b) Roles: to banish the passive role that students play within the organization of the class, SEM establishes different roles to give responsibilities to students within the development of the session and they participate more actively. The autonomy and responsibility of the students are encouraged by the incorporation of this aspect. Another positive point that this aspect brings is that it gives a greater authenticity to the practice of school sports. Some of the most common roles used in this pedagogical model are the coach, physical trainer, referee, material manager, observer, scorer, photographer, etc. Roles can be fixed or rotating; (3) Fair play: instilling in students this social aptitude is one of the goals of Sport Education. To achieve this goal, you will have to work a lot with the students because most tend not to put into practice this skill when talking about competition, one method to achieve it is rewarding players or teams that demonstrate sportsmanship with extra points, either during training, as in the games or at any time of the session.

All these aspects will help to give an educational perspective of sport within the school environment (Fernández-Río et al., 2018). The present didactic proposal is based on the SEM and to carry it out, the alternative sports modality has been chosen, to give an innovative character to the classes of the PE area.

**Alternative Sports**

To specify what alternative sports are, the concept of sport, in general, must first be clarified. According to Olivera (2006), sport shares the idea that this term is indefinable since it is a concept that comprises a great symbolic complexity, cultural dimension and social reality. In this sense, this author corroborates the definition of sport made by Cagigal (1981) which maintains that no one has
been able to define with general acceptance what sport consists of. Having said that, many authors have tried to specify what sport represents (Chamero-Muñoz & Fraile-García, 2012). For example, a type of PA which, through participation, organized or otherwise, is aimed at the expression or improvement of physical and mental condition, the development of social relations or the achievement of results in competitions at all levels.

Parlebas (1988) define the concept of sport is that it is any situation that drives coded confrontation, called a game or sport by social institutions. Sport is a specific activity of motor emulation that can have a competitive or recreational nature, in which are valued fundamentally the forms of practice of physical exercises, to which the individual or group arrives at the improvement of the possibilities morphofunctional and psychic, arranged by the record, a transcending of itself or the opponent, or the simple fun and pleasure (Antón, 2001).

Once exposed some definitions, of the multiple that exist, of the term sport, it is observed that several common features that characterize sport standout, such as: (1) motor situations; (2) improvement of the physical and psychic condition of the subject; (3) individual or group format; (4) competitive or recreational purpose; and (5) development of social skills. On the other hand, it is necessary to focus attention on educational sports. As with the term sport, for this there is also a multitude of meanings and specific characteristics, Corrales (2010) maintains that the characteristics to contribute to the education and training of students are: to encourage personal autonomy, without discrimination and participation of all, inculcate the practice of physical-sports activities in leisure time, offer fun and pleasure in practice, use a process-focused competition, encourage communication, expression and creativity, establish healthy habits of sports practice, teach to value and respect one’s abilities and those of others, improve physical condition and basic and specific motor skills, allow reflection and decision-making. It should always be taken into account what Blázquez (1995) said that maintains that the objective is not a sport, but who practices it; not the movement, but the school that moves; not a sport, but the athlete.

Once the concepts of sport and school or educational sport have been clarified, it is already possible to specify what alternative sports are, one of the main axes of this educational proposal. To this end, Robles (2008) provides an explanation of sport that includes all modalities, including alternative sports: PA where the person develops and manifests a set of movements or voluntary control of movements, taking advantage of their individual characteristics and/or in cooperation with other/s, so that you can compete with yourself, the environment or against a/s trying to overcome their limits, assuming that there are a few rules that must be respected at all times and also, in certain circumstances, you can use any type of material to practice.

There are a lot of authors who explain, from their perspective, what alternative sports are. Fierro-Suero et al. (2017) understand alternative sports as one that differs from the traditional sport by using materials whose initial function was not physical-sports activities, or even though it was its purpose, its use is different from the original. On the other hand, Hernández (2007) offers another definition of this modality: it is a set of sports that, in contrast to commonly accepted conventional models, seek to achieve a greater participatory character and/or an explicit development of social values, through regulatory modifications and/or the use of new material.
After reviewing several articles and publications by different authors, it can be determined that as stated by Fierro- Suero et al. (2017) all the definitions of alternative sports follow the same idea, sharing a common nexus and emphasizing aspects such as participation, development of values, minimum importance to the competitive result, and novel material. Arráez (1995) points out as characteristics of alternative sports the following: (1) Can be carried out in any installation; (2) It doesn’t have much difficulty, it involves basic skills; (3) The practice can be carried out by any subject regardless of the sex, age or level of skills that the subject possesses; (4) Cooperation and other values are given more importance than the competition; (5) Materials can be made through crafts.

**Ultimate Frisbee through Sport Education Model**

Another important pillar of this intervention proposal is the selection of an alternative sport. The Ultimate Frisbee has been selected for this work. According to Tejada (2010) in 1967 high school students from Maplewood, New Jersey, created a sport that was played with a frisbee, which one of them called ultimate, as the maximum sporting experience and since then it has spread throughout the world. So, you can mark the beginning of this sport around the year 1967, although, before this year, it would have been brewing, marking the date of the actual creation of a sport is very difficult because you have to take into account many factors. As Tejada (2010) says, ultimate is a team sport that combines the skills and abilities of other sports”, some of these sports are football, rugby and basketball. The Ultimate Frisbee is characterized by being a self-refereed and contactless sport. It also stands out for being a fairly fast game. Below are some of its most noteworthy peculiarities: Two teams of seven players compete on a field of play of approximate dimensions to those of a football field but narrower. At each end of the field, there is an endzone. Each team defends a zone. A goal is scored if a player picks up a frisbee in the opposite zone. The player with the frisbee is the pitcher. The pitcher can’t run with the frisbee. The plastic disk, however, moves by passing it in either direction to a teammate. The defending team takes possession of the frisbee if a pass is not caught by a player from the pitcher’s team. Then the defending team becomes the attacking team and can try to score in the opposite zone (FEDV, 2021).

Another important feature, and the essence of this sport, is the spirit of play. According to Tejada (2010), the spirit of play is the commitment that is made while the game is developed to play without attacking the other. In addition, it assumes dialogue as the main mediator in cases of misconduct or sanctions during the game. Tejada (2009) argues that to fulfil this trait, being the sport self-refereed, players must take responsibility and adopt the role of judges, they must be objective and analyze the different situations that may occur and claim fouls when they are real. To be able to play this sport correctly, players must have the spirit of play and fair play in mind, such as knowing all the rules, avoiding physical contact, and showing a positive and respectful attitude.

Camacho and Ospina (2015) determine the purpose of the Ultimate Frisbee taking as a guide the types of orientation: educational orientation, recreational orientation and competitive orientation, to apply it to the Ultimate, because it provides what the players are expected to learn, starting from the competition, but with a learning vision that allows the healthy development of the game, where it is understood and accepted that in a good game, the desire for victory should not always prevail. This
allows the sport to be assumed as support where it is capitalized for life while enjoying it; if practised safely, health is taken care of through physical exercise; it promotes integral and social development and helps to promote values in those who practice it because there is no referee in between and the players themselves must be the judges of their acts.

According to previous studies, Ultimate Frisbee has been applied through the SEM on different occasions, being one of the most predominant invasion sports in the educational context (Guijarro et al., 2020). Specifically, in the Primary Education stage there are only three school interventions which relate SEM to Ultimate Frisbee (see Martínez et al., 2016; Méndez-Gimenez & Martínez, 2017; Puente-Maxera et al., 2018). These interventions have managed to achieve significant improvements in the perception of social climate (Martínez et al., 2016), the intention to be physically active, especially in girls (Martínez et al., 2016), and improvement in the social integration of students (Puente-Maxera et al., 2018). In addition, it has been intended to give an innovative vision of the pedagogical model through the perception of the student body (Méndez-Gimenez & Martínez, 2017; Puente-Maxera et al., 2018).

Regarding school interventions of Ultimate Frisbee through the SEM in the Secondary Education stage, the studies conducted by Fernández-Río et al. (2017), Gil-Arias et al. (2017), Gil-Arias et al. (2020) and Llanos-Muñoz et al. (2022) can be highlighted. In these studies, school interventions had significant improvements in variables such as intrinsic motivation, autonomy, competence, social relationships, novelty satisfaction, interest, boredom, social responsibility, behavioral and emotional involvement, teamwork, and perceived gender differences and inequalities in PE (for more information see Fernández-Río et al., 2017; Gil-Arias et al., 2017; Gil-Arias et al., 2020; Llanos-Muñoz et al., 2022).

The present study

According to the review by Guijarro et al. (2020), a total of 16 studies have carried out educational interventions using the SEM in Primary Education PE classes, with higher application in the 5th and 6th grades. The reason for its application in the higher grades of this stage may be due to the maturity necessary for students to create and design their training activities that allow better development of the model (Guijarro et al., 2020). However, it has also been successfully applied in lower grades of Primary Education (Martínez et al., 2019). Furthermore, regarding the duration of the learning situation, no study has the duration proposed in this intervention proposal. Therefore, this school intervention will provide more knowledge about the importance of the duration of educational interventions and their consequences on the students. In addition, to help other PE teachers to carry out similar interventions, the learning situation to be developed is provided for greater transparency and understanding of what is intended to be done.

Through this work it is intended to achieve different goals that have as an initial point a proposal of intervention aimed at the area of PE, the established objectives are the following: (1) Examine in depth the pedagogical model of Sport Education and analyze different didactic proposals previously published in which this model is applied. (2) Develop an intervention proposal through the peda-
Design and Participants

This quasi-experimental study will be carried out in Cáceres (Extremadura, Spain). Convenience sampling will be conducted in one Primary School (Thomas et al., 2011). The participants in this intervention proposal will be students in the 5th year of Primary Education, aged between 10 and 11 years, belonging to four groups of the same school. Thus, the sample will be composed of 80 students. All the groups will receive the same intervention proposal and will try to develop it in the same way, taking into account the educational reality and the differences between classes. The selection of participants will be done on a purposive basis.

Intervention programme

As for the intervention programme, a total of 9 classes will be carried out, taking into account the temporalization of the SEM: three classes where the practice is organized by the teacher; three classes where there is an autonomous practice of students; two classes of competition; and one class for celebration. The sequential development of these classes according to the title, description, block of contents, resources (material and spatial), groupings, objectives, and activities divided into the initial part, main part and final part, as well as their possible variants, can be found in the supplementary material of this article (Table 1). This didactic proposal has been evaluated by a panel of experts (n = 6) and researchers in the application of pedagogical models in the educational context. The panel of experts was made up of specialists in the teaching and methodology of PE. For their part, the researchers belonged to the Sports Science and Teacher Training branch, with extensive experience in the application of didactic units in the educational context. Firstly, to evaluate the agreement among the six experts in analyzing the didactic unit, the Fleiss Kappa coefficient (Fleiss, 1981) was used, obtaining excellent scores (κ = 0.84). According to Fleiss (1981), values above .75, values between .61 and .75, and between .40 and .60 are considered excellent, fair to good and poor, respectively. This coefficient was used because it guarantees the best understanding and agreement among experts (Fleiss, 1981). In addition, previous contact has been made with the teachers who are likely to teach the subject of PE in the 5th year of Primary Education.

Methodology

The methodology through which this intervention proposal will be developed, being the main axis of it, allows the student to participate in their learning building from previous knowledge. Working with this training offers students the ability to develop their autonomy in a large percentage. In this line, Gómez-Rijo (2010) defends that when the student is educated to be autonomous, he can
analyze the advantages and disadvantages of each situation and examine which are the possible situations and which is the most appropriate, all this taking into account the environment in which he is and the people who are in it.

It should be noted that the main axis which is spoken is the pedagogical model of Sports Education, created by Siedentop et al. (2019). As described above, according to Fernandez-Rio et al. (2016), SEM is proposed as a pedagogical model whose main pillars are teamwork and the transfer of responsibilities among students to promote their autonomy in the school environment. In short, it is considered a very active methodology in which the teacher acts as a guide and the students (divided into small and fixed work groups) acquire the learning through the activities and exercises proposed by the teacher. The students are free to modify the activities or propose different ones. To further increase the role of students, they will also be involved in the evaluation, which is a shared evaluation. On the other hand, throughout the development of the teaching unit, they will also have to be involved in the evaluation, co-evaluation and self-evaluation, continuous and formative.

Procedure

During the implementation of this educational proposal, the students of the classes will be divided into different small groups, each group will be a team. Within each team, there is a role for each member of the same, the roles and responsibilities of the same are: (1) Coach. Create and modify activities to improve the skills of the players, instil sports values, raise games and help the physical trainer; Physical trainer. Plan and direct the warm-up and help the coach in everything necessary; (3) Referee. Know the rules, be partial and observant; (4) Material Manager. Responsible for taking care of, collecting and collecting the material in each session by your team; (5) Registrar. Responsible for the team folder, filling out all general documents and assisting the reporter; (6) Reporter. Record the most important moments or actions of each session and assist the registrar.

In the first session, each group will be given a team sheet in which they name who the members of each group are and what role they will play. They will also have a short guide about the Ultimate Frisbee, the competition that will be held and what are the responsibilities of each role. Students in addition to assuming one of the roles explained, will all exercise the role of player. They will assume the roles by signing the team agreement. In each session, the trainer will have to fill out a training sheet with the planned activities, just as the physical trainer will have to fill out a physical preparation sheet. The student with the role of reporter, at the end of each session, will fill in the daily news. In a given session a sheet with the rules of the Ultimate Frisbee will be distributed among the teams so that all students will have a clear what can be done and what cannot be done in the games to be played. During the development of the teaching unit, different games will be played. As a pre-season of the competition, they will play one match against each team and in the season, they will play two matches against each team. During matches, the registrar of the team that is an observer must fill in the minutes of the match. For more information, see Figure 1.
3. Discussion

The present didactic proposal aims to better understand the application of an alternative sport through an emerging pedagogical model in the context of Primary Education. As mentioned above, only three studies have applied Ultimate Frisbee through the MED at this stage. According to the existing literature, this intervention proposal aims to provide greater didactic knowledge, since it would be the first intervention carried out at the Primary Education stage in this region. Therefore, we present an innovative and novel proposal for students from Extremadura, because Ultimate Frisbee is an alternative sport whose practice is not in great demand and practice in these students.

In line with Martínez et al. (2016) and Méndez-Giménez & Martínez (2017), a quasi-experimental design by convenience with pretest, posttest and retention measures is presented. However, the present proposal aims to be applied to a larger student (n = 80) than the interventions carried out previously whose range of participants was around 20, except for the study by Martínez et al. (2016) which comprised 51 students. This will provide greater knowledge of the reasons why students can improve in social, affective and behavioral variables.

In line with Martínez et al. (2016), the roles of the students remain fixed in the development of the didactic unit. According to the literature, it is not entirely clear that the students report a greater
benefit if the roles are changed or maintained. It is believed that, depending on the duration of the didactic unit, those of short duration it is more convenient to maintain the roles because the students report a higher level of learning since they internalize the assigned roles in a better way (Siedentop et al., 2019). And for those didactic units of long duration that even alternate different sports, it is convenient to alternate roles within a team (Siedentop et al., 2019). That is the reason that this didactic proposal aims to provide greater transparency with the supplementary material on what will be developed in each of the classes of the learning situation.

This proposal aims to help teachers to find strategies to promote constructivist learning at an early age (Dyson et al., 2004). In this sense, the use of pedagogical models and, specifically, the SEM, will allow for a balance in the learning process (Robles et al., 2013) and for students to develop physically, socially and psychologically in an environment where the learning process and the acquisition of competences are the priority (Guijarro et al., 2020). Through the SEM, teachers adopt a position of support for student autonomy, favouring decision-making power (Deci & Ryan, 2008), promoting a positive social bond (Chu & Zhang, 2018) and reducing student demotivation (Manninen & Campbell, 2022). Thus, there have been numerous studies applying this model in the educational context with positive consequences for students in terms of improved levels of autonomy, motivation, participation, social relations and group interaction (Calderón et al., 2013; Chu & Zhang, 2018; Cuevas et al., 2016; Fernández-Río et al., 2021; García-López et al., 2012; Méndez-Giménez et al., 2015; Meroño et al., 2013).

For this reason, teachers are urged to promote learning environments that guarantee the inclusiveness and equity of students (Llanos-Muñoz et al., 2022). To this end, opting for new sports modalities that guarantee the simultaneous and heterogeneous participation of boys and girls in the same team is very important. In this proposal, we refer to Ultimate Frisbee because it has the perfect characteristics for its development in the educational context, given that it is a sport that works on cooperation, collaboration, fair-play and in addition, it does not have many practitioners, so there are usually no differences in terms of technical-tactical parameters among students. In this way, all pupils have an initial starting level. In short, due to the scarcity of research on school interventions based on Ultimate Frisbee as an alternative sport in the context of Primary Education through the SEM, this manuscript allows us to give greater clarity to possible interventions that can be carried out in the educational context, and thus be able to analyze and evaluate variables that have brought benefits to the students.

In summary, the school context has become the ideal place to promote values that guarantee a society that is more supportive of the people around it and that establishes the foundations for developing positive behaviour towards equal opportunities to practice sports. This will create new generations of pupils who will change their perception of PE and PA, prolonging their active lives over time, adopting healthy lifestyle habits and reducing levels of physical inactivity. This is very important because there are studies confirm that the adolescence stage is when several sport dropout behaviour occurs and there are higher rates of inactivity (Beauchamp et al., 2018; Ceschini et al., 2009). Hence the importance of generating good habits from an early age.

4. Conclusion
5. Competing interests

The authors declare no conflict of interest.

6. Funding

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7. References


**Supplementary materials**

**TABLE 1**
Development of the sessions according to goals, contents, materials, groupings and activities carried out during the class.

<table>
<thead>
<tr>
<th>Description</th>
<th>Resources</th>
<th>Groupings</th>
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<tbody>
<tr>
<td>Familiarization with the documents to be used during the didactic unit, contact with the frisbee, introduction to the Ultimate Frisbee, initiation in releases and receptions of the frisbee.</td>
<td>Team folders, sports court, cones and frisbees</td>
<td>Singles, couples and teams</td>
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<table>
<thead>
<tr>
<th>Goals</th>
<th>Resources</th>
<th>Groupings</th>
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<tbody>
<tr>
<td>• Take on the basics of the Ultimate Frisbee.</td>
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<td>• Understand the methodology to follow during the development of the didactic unit.</td>
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<td>• Organize teams and assume designated roles.</td>
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<tr>
<td>• Throw and catch a frisbee.</td>
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<table>
<thead>
<tr>
<th>Contents</th>
<th>Initial Part</th>
<th>Main Part</th>
<th>Final Part</th>
</tr>
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<tbody>
<tr>
<td>(1) Introduction of Frisbee Ultimate, brainstorming, division of teams, delivery of folders, distribution of roles and explanation of the functions of each one, explanation of the methodology to follow during the development of the sessions and establishment of the objectives of the class.</td>
<td>(3) Brief explanation of the frisbee toss.</td>
<td>(6) Collection of material</td>
<td></td>
</tr>
<tr>
<td>(2) By teams, creating a name for the team, inventing a nickname for each player, drawing the shield and inventing a battle cry.</td>
<td>(4) Frisbee passes in pairs</td>
<td>(7) Final group discussion</td>
<td></td>
</tr>
<tr>
<td>(5) Game of 10 passes with a frisbee (by teams).</td>
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</tr>
</tbody>
</table>

| Variants | |
|----------||
| (1) Introducing Frisbee Ultimate through a PPT and brainstorming through the Mentimeter app. | |
| (2) Groups of three, four or five students. | |
| (3) Confrontation between teams. | |
## Session 2: Flying the Frisbee

### Description
Development of the autonomy of the students, the practice of the different throws and catches of the frisbee, improvement of the precision

### Block of contents
- **Block I: Body scheme, abilities, skills and expression**
- **Block II: Sports, games and health**
- **Block III: Assessment of PE. Fair Play**

### Resources
- Team folders, task description document, role assessment sheet, sports court, cones, hoops and frisbees
- Singles, couples and teams

### Goals
- Carry out the appropriate warm-up for the activity to be carried out.
- Perform frisbee throws and receptions in play forms.
- Develop precision in the frisbee throw.
- Objectively analyze the work done by each team member.
- Care and place the material used correctly

### Contents

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>(1) Delivery and explanation of daily tasks along with the objectives of the class.</td>
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<tr>
<td>(2) Team warm-up, directed by the physical trainer of each one: (a) Scrolling with frisbees in different ways; (b) Frisbee throws in different ways.</td>
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</tbody>
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<tr>
<td>(3) Team task “A” - Several cones will be placed, at a distance of 8 meters, and each player will have to knock down 1 cone, at least, with the frisbee.</td>
</tr>
<tr>
<td>(4) Team task “B” - Throw and reception the frisbee in pairs.</td>
</tr>
<tr>
<td>(5) Task by team’s “C” - Precision shot to hoops hanging on goals.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final Part</th>
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<tbody>
<tr>
<td>(6) Game of 10 passes with a frisbee</td>
</tr>
<tr>
<td>(7) Role assessment and collection of material</td>
</tr>
</tbody>
</table>

### Variants
- Send assignments to students in advance via email or similar.
- Give freedom to the student with the role of physical trainer to perform the exercises that he/she wants to warm up.
- Give freedom to the student with the role of coach that varies the distance to modify the difficulty, you can also change this task for another with the same objective.
- To give freedom to the student with the role of coach that varies the groupings or the distance, you can also change this task for another one with the same objective.
- Give freedom to the student with the role of coach that varies the distance or the size of the hoops to modify the difficulty, you can also change this task for another with the same objective.
- Clash between teams.

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[84]

https://doi.org/10.33776/remo.vi21.7700
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<tr>
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<tbody>
<tr>
<td>Development of student autonomy, improvement of coordination and accuracy, the practice of launches and receptions and practice of Ultimate Frisbee.</td>
<td>Block I: Body scheme, abilities, skills and expression Block II: Sports, games and health Block III: Assessment of PE. Fair Play</td>
<td>Team folders, task description document, role assessment sheet, sports court, cones, fences and frisbees</td>
<td>Singles, couples and teams</td>
</tr>
</tbody>
</table>

**Goals**

- Carry out the appropriate warm-up for the activity to be carried out.
- Perform frisbee throws and receptions in play forms.
- Develop precision in launching frisbee on the move.
- Show interest in the Ultimate Frisbee and analyze which rules are necessary after an analysis of the sport without them.
- Objectively analyze the work done by each team member.
- Care and place the material used correctly.

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<tr>
<td>(1) Delivery and explanation of daily tasks along with the objectives of the class.</td>
<td>(3) Team Task “A” - Mini circuit, a player throws the frisbee and another must overcome a zigzag, jump a fence and receive the frisbee, when she/he has collected the frisbee will throw to one of the rings of the goal. (4) Team Task “B” - Ultimate Frisbee, by teams, without knowing the rules (the students will know them little by little).</td>
<td>(5) Team Task “C” - Each team forms a row and individually will throw a frisbee that will have to reach the greatest distance possible. (6) Consensus of rules, assessment of roles and collection of material.</td>
</tr>
<tr>
<td>(2) Team warm-up, directed by the physical trainer of each one: (a) Scrolling with frisbees in different ways; (b) Frisbee throws in different ways.</td>
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<td></td>
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</tbody>
</table>

**Variants**

- Send assignments to students in advance via email or similar.
- Give freedom to the student with the role of physical trainer to perform the exercises that he/she wants to warm up.
- Give the student freedom with the role of coach to vary the circuit, you can also change this task for another with the same objective.
### Session 4: We need more speed

<table>
<thead>
<tr>
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<th>Resources</th>
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</table>
| Development of students' autonomy, improvement of reaction speed and accuracy, the practice of throws and receptions, the practice of Ultimate Frisbee and learning the rules of this. | Block I: Body scheme, abilities, skills and expression  
Block II: Sports, games and health  
Block III: Assessment of PE. Fair Play | Team folders, task description documents, role assessment sheet, sports court, cones, hoops and frisbees |

#### Goals
- Carry out the appropriate warm-up for the activity to be carried out.
- Perform frisbee throws and receptions in play forms.
- Develop precision in launching frisbee on the move.
- Work reaction speed improving counterattacks and other moves.
- Show interest in the Ultimate Frisbee and assume the rules.
- Analyze objectively the work developed by each member of the team and work on possible tactics to use in a match.
- Care and place the material used correctly.

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(2) Team warm-up, directed by the physical trainer of each one: (a) Scrolling with frisbees in different ways; (b) Frisbee throws in different ways. | (3) Team Task “A” – “Reaction Speed”, after a signal made by a team member, the rest of the players will run a distance of 10 meters at maximum speed, take a frisbee and try to throw it through a hoop. The starting positions will change.  
(6) Role assessment and collection of material. |

#### Variants
- (1) Send assignments to students in advance via email or similar.
- (2) Give freedom to the student with the role of physical trainer to perform the exercises that he/she wants to warm up.
- (3) Give the student freedom with the role of coach to vary the distances and starting positions, you can also change this task for another with the same objective.
- (5) Add more frisbees to increase the intensity of the game.
## Session 5: A little more speed

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<td>Block II: Sports, games and health</td>
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<td></td>
<td>Block III: Assessment of PE. Fair Play</td>
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### Goals
- Make the appropriate heating to the activity to be performed.
- Perform frisbee throws and receptions in play forms.
- Develop precision in launching frisbee on the move.
- Working reaction speed improving counterattacks and other moves.
- Show interest in the Ultimate Frisbee.
- Analyze objectively the work developed by each member of the team and work on possible tactics to use in a match.
- Care and place the used material correctly.

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<td>(1) Delivery and explanation of daily tasks along with the objectives of the class.</td>
<td>(3) Team Task “A” - “Reaction Speed”, in each team pairs are made, student A is placed in front of student B, who must throw the frisbee and the A will have to catch it as soon as possible. The starting positions will change.</td>
<td>(5) Team task “C” – Precision shot to hoops hung in goal.</td>
</tr>
<tr>
<td></td>
<td>(2) Team warm-up, directed by the physical trainer of each one: (a) Scrolling with frisbees in different ways; (b) Frisbee throws in different ways.</td>
<td>(4) Team Task “B” - Ultimate Frisbee Team A vs. Team B. Winner team → 3 points; Loser team → 1 point; Tie → 2 points each team. Team C shall act as a recording observer.</td>
<td>(6) Role assessment and collection of material.</td>
</tr>
</tbody>
</table>

### Variants
- (1) Send assignments to students in advance via email or similar.
- (2) Give freedom to the student with the role of physical trainer to perform the exercises that he/she wants to warm up.
- (3) Give the student freedom with the role of coach to vary the distances and starting positions, you can also change this task for another with the same objective.
- (5) Give the student freedom with the role of coach to vary the distances, you can also change this task for another with the same objective.
### Session 6: Bull’s eye!

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Block II: Sports, games and health  
Block III: Assessment of PE. Fair Play | Team folders, task description documents, role assessment sheet, sports court, cones, hoops and frisbees |

**Goals**

- Carry out the appropriate warm-up for the activity to be carried out.
- Perform frisbee throws and receptions in play forms.
- Develop precision in the frisbee throw.
- Work on the different types of displacement to incorporate them in attack and defence situations.
- Show interest in the Ultimate Frisbee.
- Analyze objectively the work developed by each member of the team and work on possible tactics to use in a match.
- Care and place the material used correctly.

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(2) Team warm-up, directed by the physical trainer of each one: (a) Scrolling with frisbees in different ways; (b) Frisbee throws in different ways. | (3) Team Task “A” – Game ‘Leads followed’, one player will be chased by the rest. This player must run away from everyone running, the rest of the group will try to touch him with the frisbee without throwing him (all will go through the role of a chased player).  
(4) Team Task “B” - Ultimate Frisbee Match Team B vs. Team C. Winner team → 3 points; Loser team →1 point; Tie → 2 points each team. Team A shall act as a recording observer.  
(5) Collective game Mushroom (soft frisbees)  
(6) Role assessment and collection of material. | (5) Collective game Mushroom (soft frisbees)  
(6) Role assessment and collection of material. |

**Variants**

- Send assignments to students in advance via email or similar.
- Give freedom to the student with the role of physical trainer to perform the exercises that he/she wants to warm up.
- Give the student freedom with the role of coach to modify what they want or face in teams, delimit the space, and add more frisbees.
- Add more frisbees to increase the intensity of the game.
### Session 7: Let’s compete!

**Description**

Development of the autonomy of the students, improvement of coordination and accuracy, practice of launches and receptions and practice of Ultimate Frisbee.

**Block of contents**

**Block I: Body scheme, abilities, skills and expression**

**Block II: Sports, games and health**

**Block III: Assessment of PE. Fair Play**

**Resources**

Team folders, task description documents, role assessment sheet, sports court, cones, hoops and frisbees

**Groupings**

Singles and teams

**Goals**

- Carry out the appropriate warm-up for the activity to be carried out.
- Actively participate in playing Ultimate Frisbee, play fair and respectful games and demonstrate the tactics and techniques that have been practised.
- Analyze objectively the work developed by each member of the team and work on possible tactics to use in a match.
- Care and place the material used correctly.

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<td>(1) Delivery and explanation of daily tasks along with the objectives of the class.</td>
<td>(3) Exercises by the student with the role of coach of each team.</td>
<td>(5) Frisbee pass race.</td>
</tr>
<tr>
<td>(2) Team warm-up, directed by the physical trainer of each one: (a) Scrolling with frisbees in different ways; (b) Frisbee throws in different ways.</td>
<td>(4) Ultimate Frisbee inter-team matches (all teams will play against all, 10 minutes per game).</td>
<td>(6) Role assessment and collection of material.</td>
</tr>
</tbody>
</table>

**Variants**

- Give freedom to the student with the role of physical trainer to perform the exercises that he/she wants to warm up.
- Give freedom to the student with the role of coach to perform the exercises that he/she wishes for the pre-game.
- Give the student freedom with the role of coach to vary the distances.
Session 8: Let's race again!

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<th>Description</th>
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<tbody>
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<tr>
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**Goals**

- Carry out the appropriate warm-up for the activity to be carried out.
- Actively participate in playing Ultimate Frisbee, play fair and respectful games and demonstrate the tactics and techniques that have been practised.
- Analyze objectively the work developed by each member of the team and work on possible tactics to use in a match.
- Care and place the material used correctly.

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<td>(5) Precision shot to hoops hung in goal.</td>
</tr>
<tr>
<td>(6) Role assessment and collection of material.</td>
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</tbody>
</table>

**Variants**

- Give freedom to the student with the role of physical trainer to perform the exercises that he/she wants to warm up.
- Give freedom to the student with the role of coach to perform the exercises that he/she wishes for the pre-game.
- Give the student freedom with the role of coach to vary the distances.
### Session 9: Together we are better!

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Block II: Sports, games and health  
Block III: Assessment of PE. Fair Play | Team folders, task description documents, role assessment sheet, sports court, cones, hoops and frisbees | Singles and teams |

#### Goals
- Carry out the appropriate warm-up for the activity to be carried out.
- Actively participate in playing Ultimate Frisbee, play fair and respectful games and teach other colleagues the tactics or techniques they have put into practice.
- Objectively analyze the work developed among the whole class.
- Care and place the used material correctly.

#### Contents

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(2) Team warm-up, directed by the physical trainer of each one: (a) Scrolling with frisbees in different ways; (b) Frisbee throws in different ways. | (3) Friendly match of Frisbee Ultimate. | (4) Game “Catch the Flag” with the rules of the Ultimate Frisbee.  
(5) Distribution of diplomas and collection of material.  
(6) Final group discussion. |

#### Variants
- (2) Give freedom to the student with the role of physical trainer to perform the exercises that he/she wants to warm up.
- (3) Divide the students into more or fewer teams or add more frisbees.