

# Learning Processes and Human Development of Socially Vulnerable Girls in Physical Education Classes<sup>1</sup>

Processos de aprendizagem e desenvolvimento humano de meninas  
em situação de vulnerabilidade social nas aulas de Educação Física

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## ABSTRACT

This formative didactic experiment analyzes how Physical Education (PE) classes influence the learning and development of girls experiencing social vulnerability or rights violations. A didactic unit on field and bat sports was implemented over nine classes. The girls engaged in study to develop theoretical thinking and progressed from immediate movement to movement mediated by concepts. In this context, PE becomes an object of study that introduces students to body culture and contributes to their humanization. However, social vulnerability posed challenges and obstacles that require careful consideration. Even so, education remains a key pathway to confront and mitigate these effects. The findings underscore the potential of PE to promote human development.

**Keywords:** Physical Education. Developmental teaching. Social vulnerability.

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## RESUMO

Trata-se de um experimento didático formativo que objetivou analisar, a partir das aulas de Educação Física (EF), os processos de aprendizado e desenvolvimento de meninas em situação de vulnerabilidade social ou que tiveram seus direitos violados. Uma unidade didática com nove aulas foi desenvolvida com o conteúdo esportes de campo e taco. As meninas foram colocadas em atividade de estudo para desenvolver o pensamento teórico, que foi evidenciado na passagem de um movimento imediato para um movimento mediado por conceitos. A EF ganhou um enfoque de estudo, cuja importância está em humanizar a partir da inserção das alunas na cultura corporal. Contudo, os processos de vulnerabilidade social colocaram desafios e entraves que merecem ser observados. Mesmo assim, a educação é o caminho para enfrentar e mitigar os seus efeitos. Conclui-se que isso nos coloca no caminho de uma EF para o desenvolvimento humano.

**Palavras-chave:** Educação Física. Ensino desenvolvimental. Vulnerabilidade social.

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## 1 Introduction

Humanity has developed through complex social processes. According to Leontiev (1978), we are not born human; instead, we become human through cultural assimilation. Although individuals possess the potential for development, its realization depends on social interaction. Therefore, human development occurs through guidance from more knowledgeable others in the zone of proximal development (Vigotski, 2021).

Over the past few centuries, Western societies organized their social life according to capitalist principles (Freitas; Libâneo, 2018). Capitalism produces alienation, including the exclusion of many individuals from basic rights for a dignified life (e.g., land, housing, healthcare, education, and work). Vulnerable populations face precarious living conditions, persistent threats to well-being, bodily oppression, and dehumanization. Their humanity is systematically denied (Arroyo, 2019).

Individuals must access and internalize culture to achieve human development (Vigotski, 2021). When such access is denied, dehumanization may occur. The logic of private property and class division (capitalists versus workers) further intensifies inequality and vulnerability. Within the working class, alienation is pervasive; moreover, Kirk (2023) suggests that adolescents and children from this class often face feelings of anger, anomie, alienation, and anxiety. These conditions contributed to serious mental health problems among Brazilian youth. In addition, unstable family structure and limited social support shape their lives, restricting access to education and access to a more equal, fair, and compassionate world.

Social vulnerability refers to the limited capacity of individuals and communities to access material, symbolic, and cultural resources, resulting in disadvantages that constrain social mobility (Abramovay et al., 2002). Children are among the most affected groups. However, girls face even greater risks within a male-dominated socioeconomic system that threatens their well-being (Arroyo, 2019). Many come from disadvantaged families and

are exposed to adverse conditions that impair their physical, cognitive, emotional, social, and cultural development.

Human development stands in opposition to vulnerability and dehumanization. The Constitution of the Federative Republic of Brazil guarantees children's and adolescents' rights, including protection, respect, and access to a dignified life with healthcare, food, culture, and leisure (Brasil, 2016). However, persistent hardships associated with social disintegration hinder human development. Institutions committed to fostering the development of children and adolescents are essential to transform these realities.

Schools play a crucial role in the lives of vulnerable children and adolescents, serving as spaces where abuse and rights violations can be reported (Arroyo, 2019). Social service agencies also play a key role in ensuring access to their rights. One example is Casa Mamãe Margarida (CMM), a non-governmental, non-profit organization located in Manaus, Amazonas. Since 1986, it has provided shelter for girls aged 5 to 17 years and 11 months who are socially vulnerable or have experienced rights violations (Barroso; Barroso, 2022).

A partnership with CMM was established through the physical education (PE) classes. In this collaboration, CMM and the university developed educational activities (e.g., internships, university extension projects, undergraduate research programs, and the Institutional Program for Teaching Initiation Scholarships – PIBID).

Based on our previous knowledge, we observed that CMM and PE classes contribute to the girls' human development (Silva; Oliveira; Barros, 2025). A study conducted in a European school reported similar findings: inclusive and welcoming PE classes contributed to the human development of socially vulnerable refugee children (Cseplö et al., 2021).

When PE is not viewed as an activity without an educational purpose, it can contribute to the human development of the girls served by CMM. Recognized as a curricular component, PE promotes knowledge of body culture

that fosters humanization (Soares et al., 2016). To this end, we collaborated with the school's PE teacher to conduct a formative didactic experiment (Freitas; Libâneo, 2022). This study addresses the following question: How do girls in situations of social vulnerability or whose rights have been violated learn and develop through PE classes? It examines their learning and developmental processes within this context.

## **2 The Formative Didactic Experiment**

This research is grounded in developmental didactics and adopts a formative didactic experiment (Freitas; Libâneo, 2022). In line with Davidov (1988), it is guided by a commitment to the personal and social transformation of the girls at CMM. It follows a qualitative approach, focusing on the subjectivities involved in the construction of knowledge for human development.

Developmental teaching posits that children's psychological development occurs through the appropriation of knowledge and skills. Individuals engage in this process through activities, through which human culture becomes part of individual identity. Accordingly, teaching centers on the assimilation of generalized methods of action with objects mediated by scientific concepts. This process leads to qualitative changes in psychological development (Davidov, 1988; Davidov; Márkova, 1987).

In this research, we seek "to more explicitly understand and contemplate the relationships between sociocultural processes, changes in higher psychic functions and their relationship with concrete contexts in life and the teaching-learning process" (Freitas; Libâneo, 2022, p. 15). As individuals acquire historically developed knowledge and social skills, it is essential to consider the exclusion of those who are socially vulnerable or whose rights have been violated. In this study, this refers to the girls who are sheltered and cared for by CMM.

Freitas and Libâneo (2018) argue that developmental teaching in Brazil constitutes a counter-hegemonic pedagogy and that schools should

serve as spaces for social democratization and inclusion. At the same time, they must enable students to internalize historically constructed knowledge as a condition for development. According to the authors: “[...] students’ mental, emotional, and moral development depends on their engagement with historical and cultural experiences within social learning situations created and facilitated by an appropriate teaching process” (Freitas; Libâneo, 2018, p. 382).

To advance this perspective, developmental teaching must be integrated into PE. However, PE teachers are often unaware of these aims, resulting in a disconnection from social and historical issues and from the broader purpose of teaching. Despite this, existing limitations and weaknesses highlight the need for further research. A key criticism is that studies conducted in PE have not fully captured the original Russian model of the formative experiment (Real; Santos, 2021).

We acknowledge this critique but follow the guidance of Freitas and Libâneo (2018; 2022), who argue that research must be adapted to the Brazilian context. In Brazil, the emphasis lies on the didactic dimension of research, with a commitment to students’ social transformation. Accordingly, this approach is termed a formative didactic experiment (Freitas; Libâneo, 2018; 2022). This study contributes to expanding the body of evidence regarding this approach in the PE.

The research was conducted at CMM. It has an agreement with the Manaus Municipal Department of Education (SEMED) to provide instruction in early childhood education and in the early years of elementary school. The educational experiment was conducted between March and May 2025 with a 5th-grade class. The class was selected following consultation with the PE teacher.

The study was conducted in accordance with ethical guidelines for research involving human subjects. It was approved by the Research Ethics Committee of the Federal University of Amazonas (CAAE: 83373224.8.0000.5020; opinion no. 7.130.874). The PE teacher, the legal

guardians, and the girls were fully informed about the study and signed an Informed Consent Form and a Free and Informed Assent Form.

The formative didactic experiment followed the recommendations of Freitas and Libâneo (2022) and Libâneo (2023). It was conducted as part of a microcycle implemented within a teaching unit in collaboration with the PE teacher. The methodology considered the school routine and the teacher's work. The aim was to promote a qualitative change in learning and in the evidence of concept formation related to field and bat sports. This content is included in SEMED's official curriculum in accordance with the National Common Core Curriculum (Brasil, 2017). We also observed how sociocultural and institutional practices, as well as the girls' living conditions, influenced their knowledge, ways of thinking, and motivations for learning in the classroom.

The planning was organized into two stages. First, the study activity was planned, including the analysis and organization of the content (Supplementary Material 1). Second, a nine-class teaching plan focused on "study activity" was developed (Supplementary Material 2). In collaboration with the teacher, the researcher also took responsibility for conducting the process of teaching during the classes.

Data was produced and recorded in a field journal based on observations made during the classes. We recorded as much detail as possible, the events that occurred, including the actions, expressions, and words of those involved. We also used the written assignments by the girls during class.

The analyses followed the guidelines proposed by Freitas and Libâneo (2022). The analytical categories were defined as follows: (1) the teacher's role in planning and guiding the teaching–learning process; (2) evidence of qualitative changes in learning in relation to the planned objectives; and (3) structural living and institutional conditions and their influence on the teaching–learning process.

### 3 Learning and Development Processes

In this section, we present the three categories derived from the formative didactic experiment conducted in this study. First, we examine teachers' intentionality in planning and collaborating in the teaching process. Second, we compare the planned activities with evidence of qualitative changes in learning. Third, we outline how vulnerability affects everyday life and education, creating obstacles and challenges for teaching. In this regard, schools must develop educational activities grounded in everyday concepts to transform them into intellectual knowledge. Above all, this knowledge must be connected to the social and cultural values of the contexts in which it is embedded.

#### 3.1 Teaching Action as a Collaborative Aspect of the Teaching-Learning Process

The historical role of pedagogy is to care for children and guide them along the path of human development. It is therefore its duty to resist and denounce the erosion of the human dimension—recognized as a political issue—in times when human lives are under threat (Arroyo, 2019, p. 22).

Arroyo (2019) offers a perspective that extends beyond pedagogy and applies to all fields of education. He argues that PE should care for children and guide them toward becoming fully human. This view aligns with Vygotsky's theory, particularly the concept of the zone of proximal development. It emerges when teachers adopt a collaborative role and provide intentional instruction grounded in historically developed tools and knowledge (Vigotski, 2021).

Collaborative teaching expands the knowledge construction through dialogic and contextualized reflection, challenging the banking education model (Freire, 2022). In this process, children move beyond rote memorization to engage with scientific concepts. It is grounded in a dialectical relationship with the object of knowledge and, consequently, in the actions in the world based on it (Davidov,

1988). This perspective informed a pedagogical plan centered on caring for girls at risk due to social vulnerability, to support their human development as a primary contribution to their lives (Arroyo, 2019).

The implications outlined above are that a socially committed pedagogy must be clearly reflected in the instructional process. Pedagogical work should be technical without being merely technicist and grounded in a meaningful relationship between the teacher, student, and knowledge. This relationship cannot be reduced to passive transmission; rather, it should foster engagement with a field of knowledge rooted in an epistemology committed to social practices. As noted, alienation and dehumanization emerge when people lack access to historically produced culture. Schools play a crucial role in democratizing access to knowledge through structured pedagogical processes that support children's development (Freitas; Libâneo, 2018).

Historically, PE didactics have been guided by sport-centered and hygienist approaches, characterized by teaching methods that were mechanical, repetitive, and biologically oriented. Within this framework, to “learn” PE was reduced to memorizing and reproducing movements, maintaining bodily hygiene, and remaining biologically healthy. This pedagogy aimed to produce docile bodies in response to external demands, imposing a colonizing notion of “humanity” on Brazilian society through bodily practices (Soares et al., 2016).

This study presents a pedagogical conception of PE grounded in human development. In this approach, the teacher acts as a collaborator in the teaching–learning process, while the student assumes an active role in the acquisition of knowledge. The cornerstone of developmental teaching is the formation of theoretical thinking through abstraction and generalization. Here, the objective is not merely the acquisition of specific knowledge, but the cultivation of human capacities embodied within it (Libâneo, 2023).

In this formative didactic experiment, teaching was not limited to simply transmitting knowledge about field and bat sports. Instead, instruction was organized around the human capacities inherent in this content and grounded in interpersonal relationships that support the

development of intrapersonal skills among students. Consequently, students are encouraged not only to learn the technical aspects of the game but also to learn how and why to play, individually and collectively, within social contexts. The balance between playing and reflective thought generates experiences that shape reflective activity through mediation.

For this reason, two organizational steps guided the planning. First, “[...] it is necessary to select and organize content—that is, the elements of science and culture that must be internalized by members of the human species for them to become human” (Libâneo, 2023, p. 66). Second, “[...] the main focus of education is the assimilation of generalized methods of action with scientific concepts and the resulting qualitative changes in mental development” (Libâneo, 2023, p. 66).

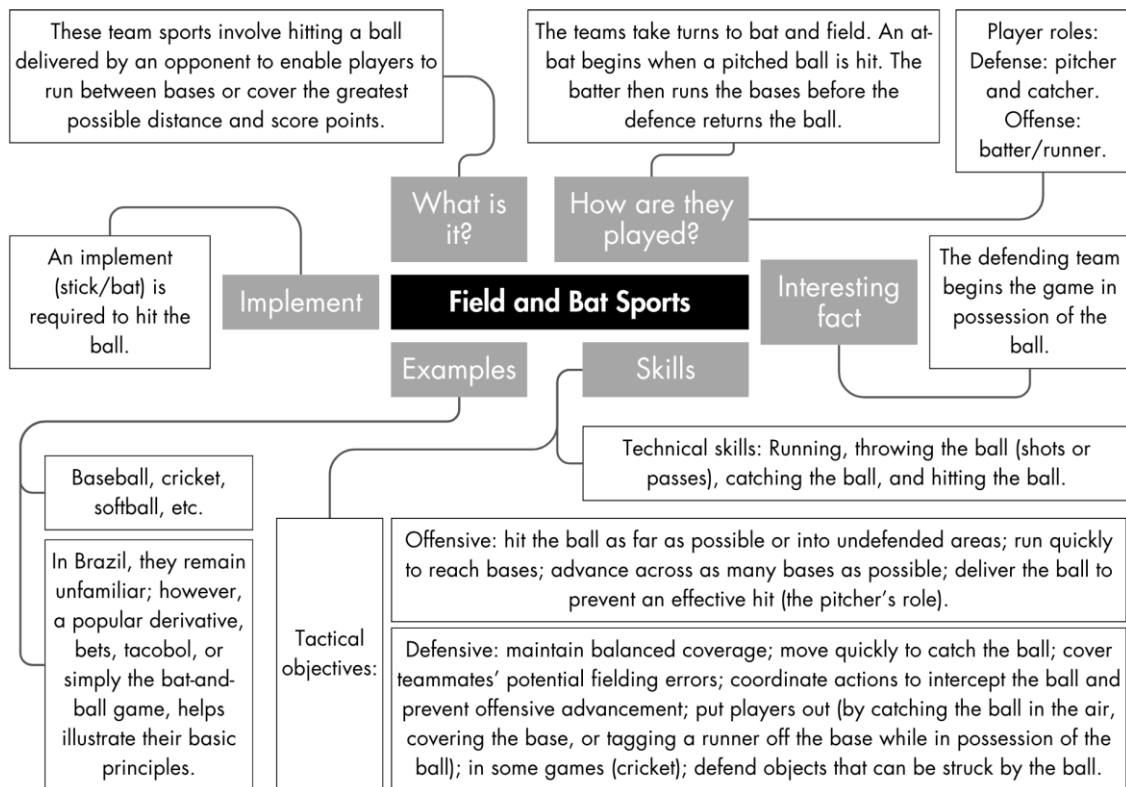
The teacher’s analysis of the content is the first step in planning a lesson based on the study activity (see Supplementary Material 1). Libâneo (2023) notes that content analysis involves the following procedures:

(a) Identifying the conceptual core of the content (basic general relationships). Accordingly, the core concept is as follows: field and bat sports involve hitting a ball delivered by the opponent as far as possible. After striking the ball, the player runs between bases as many as possible to score points, while defenders attempt to retrieve the ball (González; Bracht, 2012; Brasil, 2017).

(b) Developing an initial model of conceptual relationships. This framework was structured around the following questions: (i) What is it? (ii) What is an implement? (iii) What are some examples? (iv) Are they known in Brazil? (v) How are they played? (vi) What are the roles of the players (defense and offense)? (vii) What technical skills are required? (viii) What are the tactical objectives? (ix) What interesting facts characterize the game?

(c) Building a network of basic concepts corresponding to the conceptual core. This network was represented through a concept map (Figure 1).

Figure 1 – Concept map of the basic content of field and bat sports



Source: Prepared by the authors based on González and Bracht (2012) and Brasil (2017).

(d) Identifying the intellectual skills and abilities to be developed. The following were identified: (i) Generalization and abstraction: identifying patterns related to field and bat-and-ball sports and generalizing from the concrete example of the game of tacobol to reach abstract concepts. (ii) Problem-solving: creatively and independently addressing study assignments. (iii) Language and communication: effectively expressing and understanding complex ideas related to the practice of field and bat sports.

The organization of the content analysis preceded the development of the study assignments included in the lesson plan (see Supplementary Material 2). These assignments were designed as problem situations intended to stimulate the girls' learning activities. In the same way, the assignments provided access to a general method for solving similar problems (Libâneo, 2023). Table 1 presents a summary of the teaching plan.

Table 1 – Summary of the teaching plan

Overall objective: To develop knowledge and experience regarding field and bat sports, with an emphasis on <i>tacobol</i> .		
Lesson/Topic	Problem	Action (Daviđov)
1 - What are we going to learn?	What does it mean to play a field and bat sport?	Transforming the conditions of the study assignment to observe the universal relationship of the object of study
2 - Field and bat sports: What are they? How did they play? (Part 1)	What are field and bat sports? How do you play them?	
3 - Field and bat sports: What are they? How did they play? (Part 2)	What are field and bat sports? How do you play them?	Modeling the universal relationship of the object in an objectified, graphical, or textual form
4 - Learning about <i>tacobol</i>	What is <i>tacobol</i> ? How do you play it?	Transformation of the universal object-relationship model to study its properties in their “pure form”
5 - Linking <i>tacobol</i> to field and bat sports	What are the connections between <i>tacobol</i> and field and bat sports?	
6 - <i>Tacobol</i> rules	What are the rules of <i>tacobol</i> ? How do they affect the game?	Development of a system of assignments that can be solved using the general method
7 - Technical skills and tactical objectives in <i>tacobol</i>	How can we identify technical skills and tactical intentions in the game of <i>tacobol</i> ?	
8 - Organization of recreational <i>tacobol</i> games	Is it possible to organize <i>tacobol</i> games just for fun?	
9 - It's time to assess what we've learned	How can we assess what we've learned in class?	Analysis of the performance of previous actions
		Assessment of the level of assimilation of the general method resulting from the solution of the given study assignment

Source: Prepared by the authors.

The development of content analysis is a task that “[...] requires the teacher to have a thorough understanding of the conceptual framework of the subject matter and of the research methods used to construct that framework” (Libâneo, 2023, p. 79). Based on the teaching plan, the teacher’s work is to cultivate in students the desire to appropriate their cultural heritage. Besides, it assigns study tasks that require mental experimentation to solve (Libâneo, 2023). This perspective highlights the potential of developmental didactics for PE.

Historically, PE teachers have been associated with the image of the “athlete” and stigmatized as responsible for demonstrating movements, as if this defined effective teaching. In contrast, the developmental teaching perspective conceives the PE teacher as an intellectual (Caparroz; Bracht, 2007). Therefore, teaching extends beyond demonstrating spontaneous movement; it is a complex intellectual activity that engages students in study activity (Freitas; Libâneo, 2022; Libâneo, 2023).

PE must be reclaimed from the caricatured image of a discipline lacking pedagogical intentionality. Instead, it should be recognized as a key curricular component for humanization and human emancipation. A broader conception of PE affirms its identity as body culture expressed through human movement.

Historically, the field of PE has been shaped by a dichotomous view of theory and practice, as well as mind and body. For example, classroom lessons were often labeled “theoretical,” whereas classes on the sports court or in the schoolyard were considered “practical.” This legacy hinders efforts to transcend such divisions and to explore alternative teaching possibilities in everyday pedagogical practice.

A developmental teaching approach can open new possibilities for PE. This perspective emphasizes learning through and with movement, whereby emerging from everyday motor experiences give concrete form to scientific concepts. These concepts are not arranged hierarchically but embedded within a network of individual meanings and collective significance.

Bracht (2014) argues that the issue is neither movement without thought, nor a simple combination of movement and thought, but rather “movementthought.” This neologism expresses the dialectical unity between movement and thought. From this perspective, this concept can be clarified through Vygotsky perspective, as theoretical thought is not disembodied but emerges through the internalization of culture. This process involves the appropriation of social consciousness into individual consciousness (Leontiev, 1978).

By emphasizing “movement thought,” learning is fully realized within PE. When students engage in study activities, it becomes possible to support their learning and development by addressing the existential phenomenon in its particularities, complexities, and value conflicts. The following section further develops this idea.

### **3.2 Signs of Qualitative Changes in Learning: What Happens When We Study Physical Education?**

Comparing the planning (objectives) with the observations and study assignments carried out during classes (evidence), qualitative evidence was obtained (Freitas; Libâneo, 2022). The teaching plan aimed to develop knowledge and experience related to the field and bat sports, particularly tacobol. To sum up, 27 specific objectives were defined for the nine lessons as follows: (1) to understand the concept of field and bat sports and relate it to the game of tacobol, including its rules, techniques, and tactics; (2) to experience the game of tacobol safely and approach it from the perspective of field and bat sports; and (3) to recognize the importance of ensuring that everyone can participate in the game and have fun.

Based on the first group of objectives, in Lessons 2 and 9 (see Table 1), students completed study assignments by keeping individual written records. In Lesson 2, the girls watched an adapted game and answered the following questions: What happened? What actions are involved in the game? Why can it be considered a field and bat sport? In Lesson 9, the girls wrote a letter describing what they learned during the classes. Some excerpts from the assignments are presented below.

1) She hit the ball on the ground before the other girl could catch it. She ran with the bat and tapped it inside the circle, scoring a point. 2) Run, hit. 3) [no answer] (Lesson 2 Assignment – Girl 1).

I'm going to tell you what I learned in PE class. I learned how to play *tacobol*. First, I'll explain the rules. The defense must stay behind the attack zone for safety; the bat will hit them in the head. Now I'll talk about some aspects of the game. The defense hits the ball that the offense threw. They must hit the ball with the bat. And that's what happened in the game (Lesson 9 Assignment – Girl 1).

1) She took the ball and threw it. Then a girl ran to catch the ball that the other girl had thrown with her bat. 2) [no answer]. 3) [no answer] (Lesson 2 Assignment – Girl 2).

I'm going to tell you what I learned in *tacobol*. The offense hits the ball, and the defense throws it. I learned the rules in PE class. There's just one rule: when you touch the other team's circle, you score a point. I thought PE class was cool. We learn a lot about how to play, how to throw with the bat, and other interesting things (Lesson 9 Assignment – Girl 2).

1) I understand that in the game, we must hit the ball while the other team must run and catch it. The goal for the player with the ball is to throw it. And for the player with the bat, the goal is to hit the ball. The other team must catch the ball. 2) Azalea hit the ball, and Margarida caught it. Bromélia hit the ball wrong, and Rosa caught it fast. Petúnia threw the ball, and Lis hit it. And the girl caught it before the other girl could run into the field. 3) Because there's a bat, a field, and it's a sport. And that's why it's a field and bat sport (Lesson 2 Assignment – Girl 3).

I want to tell you what I learned at EF. I learned what field and bat sports are. Field and bat sports are sports played on a field where you need a bat. We played *tacobol*. To play, you need two pairs or two teams. There are a defensive team and an offensive team. The offensive team hits the ball, and then the defensive team runs after it. And if the defense gets there and the offense isn't at the base, the defense can try to hit the bottle. When I was playing, I was on defense. And when I threw the ball, Violeta, who was on offense, hit it back. But instead of swinging her bat, she ran after the ball. The game was fun, and I learned a lot (Lesson 9 Assignment – Girl 3).

In Lesson 2, only six girls completed the written assignment, while the others struggled and left several questions unanswered. In Lesson 9, however, 19 girls improved their written production, which is a significant increase in both the quantity and quality of their responses. The excerpts illustrate how the girls organized their understanding of field and bat sports and the tacobol game.

However, the qualitative leap did not occur solely in textual production; qualitative advances were observed in the second group of objectives related to the tacobol game. The focus in Lessons 4 through 8 (see Table 1) was the game, and advances in the girls' learning during gameplay were observed. Figure 2 illustrates the qualitative changes in learning recorded in the field diary.

Figure 2 – Overview of the learning process in Lessons 4 through 8

Lesson 4	Lesson 5	Lesson 6	Lesson 7	Lesson 8
Difficulty in arranging players on the field	Little difficulty in arranging players on the field	Only one team had difficulty getting organised.	Organised without the teacher's help.	Organised without the teacher's help.
They didn't run after the hit.	They ran after hitting the ball	They ran after hitting the ball	They ran after hitting the ball	They ran after hitting the ball
They did not cross the bats while running	They crossed the bats while running	They crossed the bats while running	They crossed the bats while running	They crossed the bats while running
They ran without hitting the ball	Some ran without hitting the ball	Only one team ran without hitting the ball	No team ran without hitting the ball	No team ran without hitting the ball
Some girls appeared unsure about the game	Few girls appeared unsure about the game	Girls more focused on the task	Girls more focused on the task	Girls more focused on the task
		They recorded the scores with the teacher's help	They recorded the scores with the teacher's help	They recorded the scores on their own

Source: Prepared by the authors based on field diaries 8–12.

Figure 2 shows the progress the girls made in their study activity. The excerpts below highlight these changes:

More generally, I noticed that the girls' playing skills had improved since the last class. They were able to control the game. My observations showed that all the actions that define the concept of field and bat sports were evident in their movements. The girls managed to play, and the emotional atmosphere of the game improved. Overall, they appeared happier, more cheerful, more outgoing, and more engaged (Field Diary 11).

My assessment is that we achieved the main objectives of the class—and of the teaching plan as a whole—regarding both immediate and mediated gameplay. In other words, the girls moved from spontaneous, disorganized movement to intentional and voluntary movement through the mediation of the studied concepts and the assigned study tasks (Field Diary 12).

After the game ended, I invited the girls to the center of the court to discuss what they had learned in class. Overall, they reported that their performance in the game had improved, which made the game more enjoyable. One girl explained that she could identify the defensive and offensive positions, noting that the defense throws the ball while the offense hits it and runs the bases. This was particularly interesting because it showed that she was able to articulate what she had experienced during the game. Her words suggested that she had internalized both the game and the knowledge associated with it (Field Diary 12).

In the third group of objectives, the girls recognized the importance of studying the game of tacobol to create conditions in which everyone could participate and enjoy the activity. The data indicate that the girls moved from immediate movement to mediated movement (Santos; Sforini, 2022). They engaged proactively and meaningfully with the content, reshaping their relationship to it by organizing the game around the problems presented in the study assignments (Libâneo, 2023).

The concept of “movementthought” (Bracht, 2014) emerges in the learning process as the girls internalize the content's conceptual core. In this perspective, learning occurs through bodily experience, allowing culture to be internalized

and transforming social consciousness into individual consciousness (Leontiev, 1978). The girls' learning in the game went beyond technical performance. They played by incorporating culturally shaped gestures and, by assigning meaning to them, advanced their human development.

Therefore, learning moved beyond repetitive, meaningless, and alienating activities. Instead, it became active, critical, collaborative, and reflective, bringing the zone of proximal development to the forefront (Vigotski, 2021). The girls' progress resulted from the teacher's consistent collaboration, who implemented intentional teaching strategies with pedagogical competence (Caparroz; Bracht, 2007).

Traditional classes centered on decontextualized transmission and repetition tend to fail in fostering such learning processes. In these cases, the immediate movement is characterized by spontaneous repetitions that shift from empirical actions to limited and decontextualized abstractions. In the worst-case scenario, alienation occurs when there is no PE class at all or when the lesson objectives do not align with the content.

By contrast, the teacher's commitment to a collaborative process proved crucial to this study. A critical, inquiry-based pedagogical approach guided the class, orienting it toward human development. In this context, students voluntarily mediate movements, which evolve from abstract actions toward concrete understanding within theoretical, complex, and dialectical thought (Santos; Sforini, 2022).

This analysis indicates that the girls achieved significant learning outcomes; however, vulnerability also shapes their development. The following section examines key obstacles and challenges encountered during the teaching–learning process.

### **3.3 When Vulnerability Impacts Development: Obstacles and Challenges for the Teaching–Learning Process**

The analysis of the qualitative advances described should not obscure the challenges and obstacles encountered during the process. For example, some girls had difficulty organizing and expressing their ideas in written assignments. Excerpts from the letters written in Lesson 9 illustrate this difficulty: “I play on a field with a bat. The first class was a mess. But in the last class things improved a little. During one class the ball hit Rosa on the head and it was kind of funny to see.” (Letter 1) “Want to know what I learned? I learned how to throw the ball, run the bases, and have my partner pitch in tacobol. And that's it.” (Letter 13) Some girls did not identify the conceptual core elements of field and bat sports described by González and Bracht (2012) and Brasil (2017).

These situations, giving the vulnerabilities the girls face, may hinder learning (Arroyo, 2019). Many girls face delays in literacy development, and some are still unable to write. Written assignments required the greatest time and effort, and writing activities often elicited negative reactions: “I heard a girl say: ‘I like the teacher’s class when it’s on the court, but I don’t like it when it’s here in the classroom.’ The other girls agreed.” (Field Diary 5)

I noticed dissatisfaction with the materials they were asked to use (worksheets and notebooks). When I tried to explain the third point, they seemed confused and frightened, as if it were too much information. At that moment, I realized I needed to step back. (Field Diary 6)

In response, we revised the teaching plan, as we had initially scheduled written for every class. We concluded that excessive demands might undermine our primary goals and demotivate the girls. Literacy-related difficulties, which extend beyond the scope of PE, should not hinder their access to the content. Therefore, we strategically scheduled study assignments at specific points to provide better support.

In the final class, the following situation occurred during the letter-writing activity:

[...] Some of the girls had difficulty organizing their thoughts in writing. We assisted each of them with their writing challenges. Although they experienced some difficulties, when I asked them verbally, they were able to respond. This indicated that the problem did not lie in learning the content itself. Rather, the girls had not yet mastered written communication in the form of a letter. Later, in a conversation with the teacher, we reflected that this may be due to the fact that their schooling is primarily based on traditional approaches centered on memorization and repetition rather than on the development of theoretical thinking (Field Diary 13).

These difficulties may also reflect the traditional educational model that the girls experience. Language and communication constitute intellectual skills that require systematic development (Libâneo, 2023). However, in contexts shaped by neoliberal educational policies, external assessments pressure teaching practices and lead education to prioritize memorization and rote learning (Longarezi; Franco, 2015).

As a result, rather than using reading and writing as tools to understand the world, students are often trained to memorize procedures for standardized tests. Instead of promoting human development, education becomes oriented toward metrics that provide only a superficial representation of reality (Arroyo, 2019).

Another relevant issue concerns how the girls perceive PE classes. They often view PE as a time for “not studying” or for “getting out of the classroom” to “burn off energy.” In many contexts, social perceptions reinforce the view of PE as merely recreational (Oliveira; Barros; Rocha, 2024).

Field observations illustrate this perception:

When I walked into the classroom, I heard another groan: “Oh, not those worksheets again!” [...] The girls still seemed upset because they simply wanted to go outside to “run and play,” as if PE class were limited to that. However, this complaint tends to arise mainly at the

beginning of class and then gradually subsides. For the most part, the girls participate well in the assigned tasks. Today was no different (Field Diary 7).

[...] One girl asked whether we would be studying different content in the next class. When I replied that we would continue working with field and bat sports, she looked disappointed and let out a sigh. I then turned to all the girls and asked, “Who is the teacher?” They replied that it was me. I told them that I knew what I was doing and that they needed to trust me. I also emphasized that their recognition that the game had not gone well was an important reason for continuing to practice, since the purpose of the PE class is to learn the content. I explained that our goal was for them to be able to play better by the end of the nine classes (Field Diary 8).

These data reveal the sustained collaborative effort the teacher invested to engage the girls in study activities and highlight the tension related to teacher authority. Nevertheless, the process unfolded responsibly through a pedagogical approach characterized by methodological rigor and an attitude of lovingness (Freire, 2022). This perspective directs attention to a key element of the learning process: motivation. According to Leontiev (1978), an activity consists of three elements: (a) a need, (b) an object corresponding to that need, and (c) a motive.

In societies structured by capitalist principles, such as Brazil, the motive often does not correspond to the object of activity. As Longarezi and Franco (2015, p. 106) note, “what motivates the student in school does not coincide with the content of the study activity.” In this context, teachers must mobilize their pedagogical activity to motivate students' engagement in study. We observed that this remains a persistent challenge, as teachers must sustain continuous effort to involve students in activities that foster development.

Finally, it is important to emphasize that the girls arrive at CMM in vulnerable, often highly complex situations. Transformative processes, therefore, require time, patience, and perseverance. Education serves as a protective and transformative space for these girls and demands strong educators' commitment to their intellectual and social development (Daviđov, 1988).

Education must also resist and denounce dehumanization that threatens human life (Arroyo, 2019). PE should therefore align itself with these principles to help mitigate the effects of vulnerability. In doing so, students can develop physically without reproducing the traditional mind-body dichotomies.

#### **4 Concluding Remarks**

This paper examines how PE classes influence the learning and development processes of girls experiencing social vulnerability or rights violations. First, human beings are inherently vulnerable, as they depend on others for their development. However, within capitalist social contexts, social vulnerability emerges as a process that threatens lives and dehumanizes individuals. In this context, education serves as a safeguard that should mitigate its growing impact. Paradoxically, neoliberal policies increasingly shape education and pressure teachers to adopt traditional teaching approaches that emphasize the transmission and reception of information, often without situating content within relevant theoretical and conceptual frameworks.

Given this contradiction, educators must commit to students' intellectual and social development. In this study, we assumed this responsibility for the girls at CMM. Our formative didactic experiment underscores the importance of intentional teaching in the planning and implementation of pedagogical activities and highlights methodological rigor and lovingness in conducting the teaching-learning process. In this sense, teaching PE involves more than training students in spontaneous movements; it requires engaging students in study so they can develop human capacities that enable critical reflection on their own movements. Such a study allows students to reflect on the assumptions, values, and everyday issues, considering their social and cultural implications. From this perspective, we propose the notion "movementthought" as an approach that transcends the dichotomies that have historically limited the field's

development. Accordingly, PE is not neutral; it is constituted through social relations that express democratic political interests and the reconstruction of social life.

When PE functions as a form of study, it gains academic legitimacy. Human movement thus becomes not merely a form of “energy expenditure,” but a vector for human development. In the face of social imaginaries that reduce PE to recreation, teachers must motivate students to recognize the need to study. Organizing knowledge and providing purposeful instruction constitute the first step in this process. Our data support this view: although the girls initially expressed resistance, the teacher’s mediation enabled them to recognize the need to engage in study. Overall, they showed significant improvement, which increased engagement and improved game organization. These changes generate moments of joy associated with accomplishment; in other words, they created conditions in which girls fulfilled their needs, contributing to their human development within a space of praxis.

This study corroborates prior research highlighting the contribution of PE to human development and supports its strengthening in schools and in public education policies. The formative didactic experiment presented here is not intended for generalization; rather, further studies may provide additional evidence for a critical, humanistic, and emancipatory education. In this regard, students can achieve more meaningful learning outcomes by engaging in study in PE, thereby enhancing their personal development through body culture. Drawing on the neologism “movementthought,” we argue that the theoretical and methodological approach adopted here contributes to the development of a PE oriented toward human development.

## Procesos de aprendizaje y desarrollo humano de niñas socialmente vulnerables en clases de Educación Física

### RESUMEN

Un experimento didáctico formativo tuvo como objetivo analizar la influencia de las clases de Educación Física (EF) en los procesos de aprendizaje y desarrollo de niñas en situación de vulnerabilidad social o que han visto vulnerados sus derechos. A lo largo de nueve clases se desarrolló una unidad didáctica sobre deportes de campo y bate. Las niñas fueron sometidas a una actividad de estudio para desarrollar el pensamiento teórico y pasaron de un movimiento inmediato a un movimiento mediado por conceptos. La EF ha ganado un foco de estudio, cuya importancia radica en insertar a los alumnos en la cultura corporal y humanizarlos. Sin embargo, los procesos de vulnerabilidad social han planteado desafíos y obstáculos que vale la pena observar. Aun así, la educación es la vía para enfrentar y mitigar sus efectos. En conclusión, esto nos pone en el camino de la EF para el desarrollo humano.

**Palabras clave:** Educación Física. Enseñanza para el desarrollo. Vulnerabilidad social.

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## Supplementary Material 1

### STUDY ACTIVITY PLANNING: CONTENT ANALYSIS AND ORGANIZATION

Guidelines based to Libâneo (2023):

- The planning of the study activity should involve analyzing and organizing the content. Study assignments should meet two conditions:
  - They should present a stimulating problem that motivates students to engage with the content and connect to their sociocultural context.
  - They should promote cognitive processes such as comparison, contrast, and the exploration of conflicts.
- After selecting the content, the teacher should take the following preliminary steps:
  - Identify the core concepts.
  - Formulate an initial model of conceptual relationships.
  - Map the conceptual network of concepts and specify their relationships.
  - Identify the key intellectual abilities and skills to be developed.

#### Study Activity Development Model

##### **Content:**

Field and bat sports – with an emphasis on tacobol.

##### **Core concept of the content:**

*According to the BNCC:*

“**Field and bat:** a category that includes sports characterized by hitting the ball thrown by the opponent as far as possible, to run around the bases as many times as possible or cover the greatest possible distance between the bases while the defenders do not regain control of the ball, thereby scoring points (baseball, cricket, softball, etc.)” (Brasil, 2017, p. 216, emphasis added by the authors).

*According to González and Bracht:*

**Field and bat sports** – these sports involve hitting the ball as far as possible to allow players to run the bases as many times as possible (or cover the greatest distance between the bases) and thus score points. In Brazil, they remain unfamiliar; however, a popular derivative, *bets*, *tacobol*, or simply the bat-and-ball game, helps illustrate their basic principles. In these sports, teams alternate between attack and defense. An offensive play begins when a batter hits a ball delivered by an opponent with a bat (or other instrument), aiming to send it deep into the field to delay its return and create time to advance and score. In several of these sports (though not in cricket), if the batter cannot complete the run in a single play, they stop at intermediate points (bases) and a new batter enters the game. The previous batter becomes a runner and continues to advance between bases. A key distinction between field and bat sports and other types of sports lies in the initial possession of the ball: the defensive team starts with the ball. Before play begins, defenders position themselves to cover areas where the ball may land. Once play starts, they use passing to return the ball quickly to positions that prevent scoring or continuing to eliminate runners. Examples include baseball, *brännboll*, cricket, *lapta*, *pesapallo*, *rounders*, and *softball* (González; Bracht, 2012, p. 25, emphasis added by the authors).

*Characteristics of field and bat sports*

<b>Field and Bat Sports</b>	
Main Objective of the Game	These sports involve hitting the ball as far as possible to allow players to run the bases as many times as possible (or cover the greatest distance between the bases) and thus score points
Examples of Sports	Baseball, cricket, pesäpallo, rounders, softball
Playing Area	A shared playing area. The offensive team designates a batter to run. More than one runner may be advancing simultaneously.
Players' roles	Variation in defensive team roles (e.g., pitcher, catcher).
Tactical Intentions	<p><b>Offensive:</b></p> <ul style="list-style-type: none"> <li>• Hit/strike the ball with force, preferably beyond the field boundaries</li> <li>• Direct the ball into open spaces, away from fielders</li> <li>• Run quickly to reach a base or complete the course</li> <li>• Maximizing base advancement based on the throw and defensive actions.</li> <li>• Deliver the ball strategically to the batter, using placement, spin, and speed to prevent an effective hit (pitcher's role in baseball)</li> </ul> <p><b>Defensive:</b></p> <ul style="list-style-type: none"> <li>• Maintain balanced field coverage</li> <li>• Move quickly to field the ball</li> <li>• Cover potential errors in teammates' reception</li> <li>• Coordinate actions to intercept the ball and prevent offensive progression</li> <li>• Put players out by catching the ball in the air, closing bases, or tagging the runner outside the base while in possession of the ball</li> <li>• In some games, defend specific targets (e.g., wickets in cricket that the ball may strike) or the strike zone in baseball</li> </ul>
Technical Skills	<ul style="list-style-type: none"> <li>• Running between bases; Throwing (including passing); Catching; Batting (striking)</li> </ul>
Offensive Strategies	<ul style="list-style-type: none"> <li>• Apply pressure to the game</li> <li>• Maintain offensive play for as long as possible</li> </ul>
Defensive Strategies	<ul style="list-style-type: none"> <li>• Maintain balanced positioning in the field</li> <li>• Contain the runner at the base</li> </ul>

Source: González and Bracht (2012).

**Initial mapping of conceptual relationships:***What is it?*

These team sports involve hitting a ball delivered by an opponent to enable players to run between bases or cover the greatest possible distance and score points.

*The use of the implement.*

An implement (stick/bat) is required to hit the ball. According to the Michaelis dictionary, “implement” means: “1. That which completes or accomplishes something. 2. That which serves to fulfill or execute; fulfillment, execution. 3 That which is needed for the execution of something; accessory, equipment, gear (most commonly used in the plural)”

(source: <https://michaelis.uol.com.br/palavra/NyLba/implemento/>).

*What are some examples?*

Baseball, cricket, softball, etc.

*Are they well-known in Brazil?*

In Brazil, they remain unfamiliar; however, a popular derivative, bets, tacobol, or simply the bat-and-ball game, helps illustrate their basic principles.

*How is it played?*

In these sports, teams alternate between attack and defense. . An offensive play begins when a batter hits a ball delivered by an opponent with a bat (or other instrument), aiming to send it deep into the field to delay its return and create time to advance and score.

*Player roles*

Defense: pitcher and catcher.

Offense: batter/runner.

*Required technical skills*

Running, throwing the ball (shots or passes), catching the ball, and hitting the ball.

*Tactical objectives*

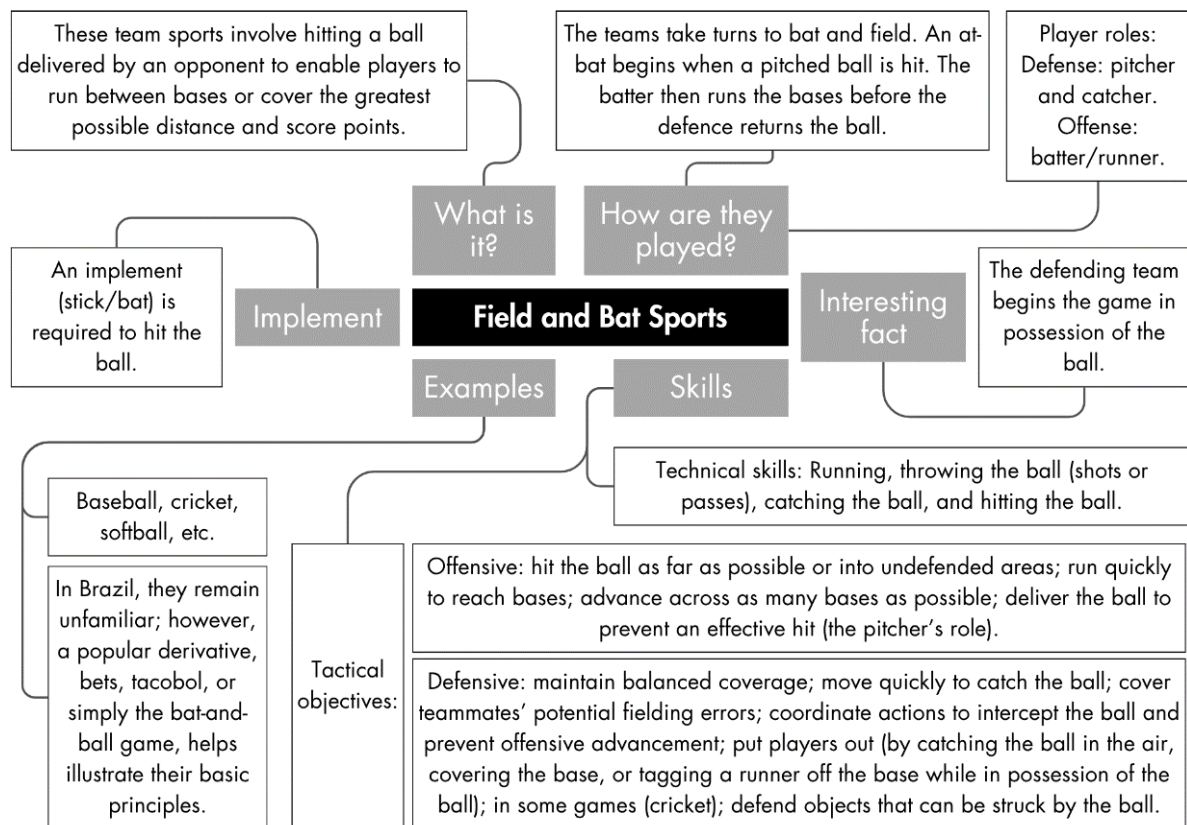
Offensive: hit the ball as far as possible or into undefended areas; run quickly to reach bases; advance across as many bases as possible; deliver the ball to prevent an effective hit (the pitcher’s role).

Defensive: maintain balanced coverage; move quickly to catch the ball; cover teammates' potential fielding errors; coordinate actions to intercept the ball and prevent offensive advancement; put players out (by catching the ball in the air, covering the base, or tagging a runner off the base while in possession of the ball); in some games (cricket); defend objects that can be struck by the ball.

*Interesting fact*

Field and bat sports differ from other sports in that the defending team begins the game in possession of the ball.

**Overview of basic concepts:**



**Key intellectual skills and abilities to be developed:**

- **Generalization and abstraction:** identify patterns in field and bat sports and generalize from concrete (examples in the game of tacobol) to derive abstract concepts.
- **Problem-solving:** solve problems creatively and independently through study tasks.
- **Language and communication:** communicate effectively about learning in field and bat sports to support the expression and understanding of complex ideas related to their practice.

***Other general skills:***

- Abstract and logical thinking (without relying on concrete examples).
- Problem-solving (creatively and independently)
- Generalization and abstraction (identifying patterns and generalizing from concrete examples to arrive at abstract concepts)
- Cognitive autonomy (learning to perform activities on one's own)
- Planning and control of thought (organizing and monitoring progress in the development of ideas and task completion)
- Systematic scientific approach (use of methodologies that foster a reflective and investigative mindset)
- Reflection on one's own learning (self-criticism regarding how to improve one's own learning performance)
- Language and communication (effective communication that facilitates the expression and understanding of complex ideas)

## Supplementary Material 2

### GUIDELINES FOR DEVELOPING A TEACHING PLAN

Guidelines based on Freitas and Libâneo (2022):

- Develop the teaching plan collaboratively with the teacher.
- Begin with an analysis of the conceptual content that guides students' study activity (identifying the general, universal, and abstract relationships that constitute the initial abstraction within a field of knowledge).
- Define the content of the study activity (what the student will do, for what purpose, and under what conditions).
- Design study tasks must engage students' motivations by considering their lived experiences, sociocultural context, and the dominant developmental activity.
- Use sociocultural and institutional practices as references to connect everyday and scientific concepts, enabling the dual movement of teaching.
- Organize students' study activities according to Davydov's six actions: ensuring alignment with the objectives and consideration of students' prior knowledge (everyday or scientific) of the object of study.
- Structure study tasks to initially present a problem that engages with the object of knowledge and unfolds through the six actions, following the movement from abstract to concrete thinking.
  - Study actions:
    - Transform task conditions to identify the universal relationship of the object of study.
    - Model this relationship in an objectified form (e.g., graphically or symbolically).
    - Transform the model to analyze its properties in a "pure" form.
    - Solve a system of tasks using the general method.

- Analyze the performance of the previous actions.
- Assesses the level of appropriation of the general method.
- During the experiment, the researcher follows students' actions step by step, observes and records them, and discusses successes and difficulties with the collaborating teacher to make necessary adjustments.

## Template for Developing a Teaching Plan

### Physical Education Teaching Plan

<b>School:</b> Casa Mamãe Margarida	
<b>Education Level:</b> Elementary School	<b>Grade/Class:</b> 5th grade
<b>Schedule:</b> Monday 1:15–2:15 p.m.   Wednesday 8:00–9:00 a.m.	
<b>Teacher:</b> Barbara (Fictício)	
<b>Researcher:</b> Victor José Machado de Oliveira	

**Overall Objective:** To develop knowledge and experience in field and bat sports, with an emphasis on tacobol.

**BNCC – Physical Education – Grades 3–5: (EF35EF05)** Experience and engage in various types of field and bat sports, net/wall sports, and invasion games, identifying their common elements and developing basic individual and collective strategies, with an emphasis on teamwork and active participation.

**Diagnostic Assessment:** To be conducted through initial observations and a group discussion during the first lesson.

Lessons				
Topic/ Content	Specific Objectives (procedural, attitudinal, and conceptual skills)	Methodological Approach (study activities)	Materials	Assessment

<b>Lesson 1</b>				
What are we going to learn?	<p>C – Understand the research question related to field and bat sports.</p> <p>P – Explore the fundamental concepts of field and bat sports.</p> <p>A – Recognize the relevance of field and bat sports.</p>	<ol style="list-style-type: none"> <li>1. Presentation of the initial problem: <i>“What does it mean to play a field and bat sport?”</i></li> <li>2. Brainstorming: students share prior knowledge, recorded on the board.</li> <li>3. Initial investigation using notebooks/activity sheets and supporting materials (guide, dictionary, video, internet).</li> <li>4. Lesson closure with student feedback.</li> </ol>	<p>Whiteboard; markers; guides; notebooks/activity sheets; dictionaries; computers; projector/TV.</p>	<p>Diagnostic (brainstorming).</p> <p>Formative assessment based on written records in the notebook/activity sheet.</p> <p>Formative assessment based on field diary entries.</p>
<b>Lesson 2</b>				
Field and Bat Sports – What Are They? How Are They Played? (Part 1)	<p>C – Understand the concept of field and bat sports and their main elements.</p> <p>P – Experience an adapted version of a field and bat sport.</p> <p>A – Recognize the relevance of field and</p>	<ol style="list-style-type: none"> <li>1. Presentation of the lesson problem: <i>“What are field and bat sports, and how are they played?”</i></li> <li>2. Brief explanation of the lesson objective and the adapted “offense vs. defense” game, emphasizing the need for safety precautions during the activity. Presentation of a poster illustrating</li> </ol>	<p>Poster prepared by the teacher illustrating the adapted “offense vs. defense” game.</p> <p>1 bat.</p> <p>5 balls.</p>	<p>Formative assessment based on written records in the notebook/activity sheet.</p> <p>Formative assessment based on field diary entries.</p>

	bat sports.	the game. 3. Implementation of the “offense vs. defense” game while discussing its components. Note: The class will be divided into two groups. While one group plays, the other observes and takes notes under the teacher’s guidance. 4. Lesson closure with feedback from the students.		
<b>Lesson 3</b>				

<p>Field and Bat Sports – What Are They? How Are They Played? (Part 2)</p>	<p>C – Understand the concept of field and bat sports and their main elements. P – Create a poster illustrating the concept and elements of field and bat sports. A – Recognize the relevance of field and bat sports.</p>	<ol style="list-style-type: none"> <li>1. Presentation of the lesson problem: <i>“What are field and bat sports, and how are they played?”</i></li> <li>2. Poster production: distribute the materials and ask the students to create a poster addressing the lesson question.</li> <li>3. Presentation of the posters in a discussion circle.</li> <li>4. Lesson closure with feedback from the students.</li> </ol>	<p>5 sheets of poster board Pencil Pen Marker Ruler Notebook/activity sheet</p>	<p>Formative assessment based on poster production. Formative assessment based on field diary entries.</p>
<p><b>Lesson 4</b></p>				
<p>Getting to Know Tacobol</p>	<p>C – Identify the elements of tacobol. P – Experience playing tacobol safely. A – Recognize the need for caution during the game to prevent accidents.</p>	<ol style="list-style-type: none"> <li>1. Presentation of the lesson problem: <i>“What is tacobol, and how is it played?”</i></li> <li>2. Brainstorming: in a circle, ask the students whether they are familiar with tacobol. If so, invite them to explain what they know.</li> <li>3. Brief explanation of the lesson objective and the rules of tacobol,</li> </ol>	<p>2 tacobol kits (bat, ball, and base).</p>	<p>Formative assessment based on field diary entries.</p>

		<p>emphasizing safety during play.</p> <p>4. Implementation of tacobol while discussing its main elements.</p> <p>5. Lesson closure with feedback from the students.</p>		
<b>Lesson 5</b>				
<p>Relating Tacobol to Field and Bat Sports</p>	<p>C – Relate the elements of tacobol to the principles of field and bat sports.</p> <p>P – Experience tacobol safely.</p> <p>A – Recognize the need for caution during the game to prevent accidents.</p>	<p>1. Presentation of the lesson problem: <i>“What are the connections between tacobol and field and bat sports?”</i></p> <p>2. Review of the principles of field and bat sports.</p> <p>3. Brainstorming: in a discussion circle, ask the students to identify connections based on the previous lesson.</p> <p>4. Implementation of tacobol while discussing the relationships between its elements and field and bat sports.</p> <p>5. Written record in the notebook/activity sheet.</p> <p>6. Lesson closure</p>	<p>2 tacobol kits (bat, ball, and base)</p> <p>22 notebooks/activity sheets</p> <p>Posters produced in Lesson 2</p>	<p>Formative assessment based on written records in the notebook/activity sheet</p> <p>Formative assessment based on field diary entries</p>

		with feedback from the students.		
<b>Lesson 6</b>				
Tacobol Rules	<p>C – Identify the rules of tacobol.</p> <p>P – Play tacobol while applying its rules.</p> <p>A – Reflect on whether the rules allow all students to succeed in the activity.</p>	<ol style="list-style-type: none"> <li>1. Presentation of the lesson problem: <i>“What are the rules of tacobol, and why are they important?”</i></li> <li>2. Presentation of a poster with the rules of tacobol, followed by a collective reading with the students.</li> <li>3. Brainstorming: in a discussion circle, ask whether the rules allow everyone to succeed in the activity. If not, discuss possible adaptations to make them more inclusive.</li> <li>4. Implementation of tacobol while discussing its rules and necessary adaptations.</li> <li>5. Written record in the notebook/activity sheet.</li> <li>6. Lesson closure with feedback from the students.</li> </ol>	2 tacobol kits (bat, ball, and base) 22 notebooks/activity sheets	<p>Formative assessment based on written records in the notebook/activity sheet</p> <p>Formative assessment based on field diary entries</p>
<b>Lesson 7</b>				
Technical	C – Identify	1. Presentation of	2 tacobol kits	Formative

<p>Skills and Tactical Intentions in Tacobol</p>	<p>the technical skills and tactical intentions in tacobol. P – Evaluate the technical skills and tactical intentions in tacobol. A – Recognize the diversity of students’ learning paces and provide support based on their potential.</p>	<p>the lesson problem: <i>“How can we identify the technical skills and tactical intentions in tacobol?”</i> 2. Presentation of an evaluation form for recording observations on technical skills and tactical intentions. 3. Implementation of tacobol in a dialogic manner, while observing and recording students’ technical skills and tactical intentions. 4. Lesson closure with feedback from the students.</p>	<p>(bat, ball, and base) 22 evaluation forms</p>	<p>assessment based on evaluation forms Formative assessment based on field diary entries</p>
<p><b>Lesson 8</b></p>				
<p>Free-Play Tacobol Games</p>	<p>C – Understand how to organize tacobol games. P – Organize tacobol games. A – Discuss game organization with the aim of ensuring inclusive participation.</p>	<p>1. Presentation of the lesson problem: <i>“Is it possible to organize tacobol games so that everyone can have fun?”</i> 2. Hands-on experience in organizing free play tacobol games. 3. Lesson closure with feedback from the students.</p>	<p>2 tacobol kits (bat, ball, and base)</p>	<p>Formative assessment based on field diary entries</p>

Lesson 9				
Assessing What We Have Learned	C – Understand methods of assessment and self-assessment related to learning. P – Assess and self-assess understanding of the content. A – Recognize learning as a continuous process of inquiry.	1. Presentation of the lesson problem: <i>“How can we assess what we have learned during the classes?”</i> 2. Implementation of assessment and self-assessment activities. 3. Group discussion on what has been learned throughout the classes. 4. Lesson closure with feedback from the students.	22 assessment and self-assessment sheets Pens Pencils Erasers	Summative assessment based on assessment and self-assessment forms Formative assessment based on field diary entries