The Physical Educator Vol. 80 • pp. 631–656 • 2023
https://doi.org/10.18666/TPE-2023-V80-I6-11443

PEDAGOGY

Healthy Eating at School: Pedagogical Proposal for the Sixth Year of Primary School

Pedro José Carrillo López

Abstract

This manuscript describes a pedagogical proposal for the adherence to healthy eating in sixth-grade schoolchildren. The reason for the design lies in the high prevalence of overweight and obesity together with a growing current sedentary lifestyle, aspects that constitute a serious public health problem worldwide with an upward trend and pandemic character. Therefore, we carried out six sessions in which schoolchildren participated in different activities for the knowledge of a varied and balanced Mediterranean diet, as well as for its reflection and practice outside the educational center that allows a greater didactic transposition between the school and the educational center. We are born with a body and it has to last us in good condition for the rest of our lives. For this reason, physical activity practiced regularly and in the appropriate way, together with dietary control, is the best tool available today for the promotion of health and quality of life of schoolchildren. In this sense, acquiring such habits from a young age is not of little importance: It is of absolute importance (Aristotle 384–322 BC).

Theoretical Foundation

Currently, the high prevalence of overweight and obesity together with a growing sedentary lifestyle constitutes a serious public health problem worldwide with an increasing trend and pandemic

Pedro José Carrillo López, Department of Education, Government of the Canary Islands, Spain. Please send author correspondence to pj.carrillolopez@um.es

character (Aranceta-Bartrina et al., 2020; Carrillo-López & Pérez-Soto, 2021).

Therefore, physical education (PE) is a transcendental area for the acquisition of healthy lifestyle habits in the first years of schooling, when the learning and assimilation capacity is greater in schoolchildren in these age stages (Rosa-Guillamón et al., 2018). For the acquisition of healthy lifestyle habits, it is necessary for a person to achieve an adequate motor development, which is the adaptation of the human being that determines the mastery of themself and their immediate environment.

To respond to these situations, the teacher needs to take an adequate approach to PE (Baena-Extremera & Ruiz-Montero, 2010) with an objective oriented to the development of the motor competence of the students. Motor competence includes the integration of knowledge, procedures, attitudes, and emotions linked to motor behavior. Such an approach allows the teacher to effectively resolve the multiple interactions the individual performs with their environment and with others in various contexts of everyday life (Decree 89/2014, 2014).

This learning situation is protected by the legal framework of the supreme norm, the Spanish Constitution, where article 43.3 recognizes the right to health protection, entrusting the public authorities to guarantee it through preventive measures, benefits, and necessary services. These aspects are reflected in the Organic Law 3/2020, where it urges schools to adopt policies that support a healthy diet. Specifically, it points out that the promotion of health in the educational sphere contributes to the development of a healthier life for the youngest population groups, regardless of factors such as social class, gender, or the level of education their parents or other parental figures attained.

In this line of argument, with the premise that everything ceases to be important when health is lost, health is the most valuable personal patrimony, whose content varies according to the historical, cultural, and social conditions of the community that formulates and accepts it (Sánchez-Bañuelos, 2000). At the international level, the World Health Organization (2021) says that health is the existing balance between the four dimensions of physical, social, mental, and emotional, interpreted as a complete "transitory" state of well-being.

In this context, the school is an ideal environment for potential initiatives aimed at health promotion (Rosa-Guillamón et al., 2019). Therefore, in the Canary Islands, projects such as "PIPO" or DELTA are promoted in their educational centers, focusing on the components of healthy eating, promotion of PA, knowledge of the body and the heart, and prevention of addictions.

For its part, the Ministry of the Canary Islands through the educational network Canaria innovAS, the PIDAS project (2021–2022 course), specifically with the thematic axis 1 (Promotion of Health and Emotional Education), 2 (Environmental Education and Sustainability), and 5 (Social, Cultural, and Historical Heritage of the Canary Islands), tends to promote a healthier, inclusive educational practice and to demonstrate the commitment of students to sustainable development, on the basis of the ethics of sustainability and care of people and their environment to sustain life. Decree 89/2014 states that Health Promotion and Education is a global process, which includes not only actions aimed directly at strengthening the skills and abilities of each person, but also those aimed at modifying social, environmental, and economic conditions. The School and Health Programme is one of the educational programs coordinated by the Educational Innovation Service and is aimed at all nonuniversity public schools in the Canary Islands. Its aim is to collaborate with the educational communities of the Canary Islands, with other bodies, entities, and socio-community agents, in the promotion of healthy habits and lifestyles, such as the one on food in this manuscript.

A key aspect of this healthy program is diet, which is healthy when it promotes good health and reduces the risk of chronic diseases (Carrillo-López et al., 2018; García-Cantó et al., 2019). There may be a close relationship between diet and the risk of developing these chronic diseases characterized by high morbidity and mortality. The Mediterranean dietary pattern is a centuries-old tradition that contributes to an excellent nutritional status, provides a pleasurable sensation, and is part of the world culture. Some of the most solid and recent studies of the last decade suggest a close relationship between unhealthy lifestyle and disease risk (Norte-Navarro & Ortiz-Moncada, 2011).

According to Calañas-Continente and Bellido (2006), a healthy diet should

- ensure that the overall benefit of your recommendations outweighs any potential hazards in your target population groups.
- provide a sufficient amount of calories to carry out the necessary metabolic processes and physical work.
- supply sufficient nutrients with plastic and regulatory functions.
- favour the maintenance or achievement of the ideal weight.
- favour the balance between the amounts of each of the nutrients. It is advisable to have a carbohydrate intake of 45–65% of the total caloric intake, fat intake of no more than 20–35% of daily calories and 10–35% in the form of proteins of high biological value.
- reduce the risk of diet-related chronic diseases.

Curricular Foundation

This educational intervention is proposed within the legal framework establishedby the LOMLOE (2020), under the premise of educational excellence, Royal Decree 126/2014, which establishes basic learning:

- to develop individual and team work habits, effort, and responsibility in study, as well as attitudes of self-confidence, critical sense, personal initiative, curiosity, interest and creativity in learning, and entrepreneurial spirit (Stage B Objective)
- to acquire in at least one foreign language the basic communicative competence that will enable them to express and understand simple messages and to cope in everyday situations (Stage F Objective)
- to develop basic mathematical skills and begin to solve problems that require elementary arithmetic operations, geometric knowledge and estimation, as well as being able to apply them to everyday situations (Stage G Objective)
- to be initiated in the use, for learning, of information and communication technologies, developing a critical spirit toward the messages they receive and elaborate (Stage I Objective)

- to value hygiene and health, accept one's own body and that of others, respect differences, and use physical education and sport as a means to promote personal and social development (Stage K Objective)

Specifically, in the Community of the Canary Islands, we start from the legal context established by the Canarian Law 6/2014, and specifically from the evaluation criteria established in Decree 89/2014. These connect the rest of the curricular elements, in coherence with the Order ECD 65/2015 and the Order of 21 April 2015. For this proposed intervention, we take these evaluation criteria into account:

1) apply the different basic and generic motor skills to the resolution of motor problems with spatial-temporal conditions and diversity of stimuli to consolidate coordination and balance
4) integrate in physical-motor activities the knowledge of physical education and the knowledge introduced by other areas
5) perform physical activity, identify and apply preventive habits for health and well-being, expressing an attitude against bad habits and critically assessing the messages that deviate from a healthy body image
7) apply the information and communication technologies from the motor situations practiced, both for the extraction and elaboration of information and for the resolution of motor problems and the improvement of their motor practice

Likewise, we consider the contents related to Learning Block I "Body Reality and Motor Behaviour," which allowed us to develop sessions and final products for the acquisition of the "competences of learning to learn," "linguistic communication," "mathematics and science and technology," and "digital and social and civic competences.

Attention to Diversity

PE is one of the areas of the curriculum that contributes decisively to the full development of the person, maturation, and effective social inclusion. Under the protection of Decree 25/2018,

this intervention adopted the necessary measures for personalized attention, the prevention of difficulties, and educational reinforcements that contribute to the inclusion of all students.

This intervention considered the psycho-evolutionary characteristics of 6A students. In this case, a group of 25 schoolchildren, aged 11 to 13 years old, who could present the evolutionary characteristics associated with the Stage of Concrete Operations described by Piaget and Inhelder (2015), reflecting an accelerated physical development in the motor level, a progressive acquisition of autonomy with respect to adults in the socio-affective level, and an improvement of concepts without the need to relate them directly to the experience in the cognitive level.

From a medical point of view, schoolchildren with attention deficit disorder present a persistent pattern of inattention or hyperactivity-impulsivity that is more frequent and severe than that observed in other schoolchildren their age, with negative repercussions that may negatively affect their social, school, and family life. These symptoms must be present in both the school environment and the family environment, some must have appeared before the child turned age 7, and must not be motivated by other clearly defined disorders.

Some of the measures for consideration with this student are (1) placing the student at the beginning of the class, where they can receive direct attention from the teacher; (2) avoiding sources of distraction; (3) providing them with a partner guide to help them review the fundamental points of the explanation; (4) providing frequent and regular breaks; and (5) using the agenda.

After presenting some of the measures or adaptations for this student, we proceed to the development of the methodological proposal whose objective is to carry out a learning situation aimed at the acquisition of healthy eating for the sixth grade of primary school.

Method

Educational Intervention

In this intervention of the "homework" type, six 45-min sessions aimed at learning healthy eating habits and developing critical thinking about food that is harmful to health and sustainable development

were developed from September 14, 2020, to September 30, 2020. This is the first learning situation aimed at health development at this primary school in Spain and was taught after the summer holiday period. This learning situation occurred in September for students to establish good eating habits that would last throughout the school year and their lives. This learning process encompasses the methodological proposal in Table 1.

Table 1
Sessions in the Methodological Proposal

Session	Contents
1	Basic notions: diet, food, and nutrition. Healthy v. unhealthy
2	Food basics II: When, how, and what?
3	Food groups
4	Functions of food
5	Sugar: the enemy of good nutrition
6	Feeding: anatomy and physiology

Methodological Foundation

The didactics of the session were based on the general educational (art. 2) and methodological (art. 8) principles in Decree 25/2018 and in accordance with the reality of the center. The activities were based on the motor actions in Appendix.

The teaching model was based on motor literacy, starting from two aspects: the students' centers of interest, which had an appropriate level for their age (learning through play), and the reflection-action to consolidate learning.

The techniques used included direct instruction through the assignment of tasks and inquiry through guided discovery, with use of interrogative feedback during the games. Feedback was used as a strategy in global practice.

The group organization was carried out following criteria of active participation, level of motor competence and equality, favoring the treatment of the transversal elements established in article 10 of Royal Decree 126/2014. The position of the teacher evolved from an external focal situation for the explanation of the games, control of the group, and contingencies, to an internal position of mediation, motivation, and attending to diversity. The methodological strategies

of the Ministry of Education, Culture, and Sports (2014) were accounted for in the promotion of learning through increased motor engagement time. Strategies in use included brief and precise explanations, variants during the game, and varying as little as possible the organization of the group during these game activities. Safety measures were adopted in accordance with Royal Decree 132/2010. Likewise, potentially stimulating materials for physical practice was used.

Results

Vaca Escribano's (2010) session model was followed. Thus, this intervention used a practical proposal based on two pedagogical times.

Session 1. Basic Notions: Diet, Food and Nutrition—Healthy vs. Unhealthy

First Pedagogical Time: The Session

Meeting and Animation (10 min). Welcoming of the group; roll call; KIDMED questionnaire (initial assessment; Serra-Majem et al., 2004); presentation of the contents (5 min); practice of games for the critical development of nutrition as an essential value for optimal health, respect for classmates, teachers and material, and active participation and effort.

"**Healthy Folio" (5 min).** Game allows neuromotor activation, in addition to the work of the concepts of "*diet,*" *"food,"* and *"nutrition."*

- Explanation of the game: Three schoolchildren represent *unhealthy diet, unbalanced diet,* and *empty nutrition.* The children run freely around the gym. If a student gets caught by the *unhealthy diet*, they go on quadruped; if a student gets caught by the *unbalanced diet*, they close one eye; and if a student gets caught by the *empty nutrition*, they stand on one leg. The student can save themself if the go to the folio and write down a healthy habit.
- Grouping: three groups.
- Material: paper, bibs, and sports court.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

Integral Education Through the Body and Movement (35 min).

"False Myths" (10 min). Game allows neuromotor activation, in addition to working on the concept of *"food myths."*

- Explanation of the game: The starting point is a distribution of five groups marked by colors (red, green, yellow, blue, and without bibs), all located in the center of the field, with the teacher in the middle. Questions related to food are asked, where the possible answers are A, B, C, and D. Each letter corresponds to a corner of the court. When the teacher asks the question, the five members of the group gather and decide how to distribute themselves according to the answer they consider most appropriate. In 30 s, the students must be in the corners. The teacher gives the correct answer, awarding points to the teams depending on the number of team members in the corner of the correct answer.
- Grouping: five groups.
- Material: feeding cards, bibs and sports court.
- Variant: include healthy habits.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

"**The Shopping List" (10 min).** Game allows neuromotor activation, in addition to working on the concept of *"healthy foods"* and *"unhealthy foods."*

- Explanation of the game: In groups of five, the student write a shopping list on a piece of paper and stand in rows behind benches. Behind these are food on cards, as if they were distributed in the supermarket, in the middle of the motor route. The players go out without food in hand, picking it up in the supermarket. When they reach the end, they put the food in the shopping bag.
- Grouping: five groups.
- Material: cards and sports court.
- Variant: include healthy habits.
- Attention to diversity: teacher carries carry out structured, explicit explanations following a prefixed sequence of steps.

"**Healthy Food" (10 min).** Game allows neuromotor activation, in addition to working on the concept of *"healthy diet versus unhealthy diet."*

- Explanation of the game: In groups of four, the students classify foods and habits into healthy (put on the right) and unhealthy (put on the left). They think about the foods and their characteristics at each exit.
- Grouping: five groups.
- Material: cards and sports court.
- Variant: include healthy habits.
- Attention to diversity: teacher carries carry out structured, explicit explanations following a prefixed sequence of steps.

Farewell (10 min). Reflection on learning by means of a metacognition ladder based on questions such as What have you learned? What other occasions can you use this information for? How did you learn this information? and How has this information helped you?

"**I Represent Food" (5 min).** Students stand in a circle. One takes a card and represents the food with descriptive words and/or hand gestures. The rest guess the food and whether it is healthy or not and argue why.

- The teacher ends the session by assigning the next week's roles and talking about personal hygiene.

Second Pedagogical Time

Before finishing, the teacher recommends that for the school blog, students with their friends or family make a recording identifying healthy and unhealthy food at home. The aim of this project is for students to develop digital competence.

Session 2. Food Basics II—When, How, and What?

First Pedagogical Time: The Session

Meeting and Animation (10 min). Welcoming of the group; roll call; presentation of the contents (5 min): practice of games for the critical development of nutrition as an essential value for optimal health, respect for classmates, teachers and material, and active participation and effort.

"**Unhealthy Foods" (5 min).** Game allows neuromotor activation, in addition to working on the concepts of *"healthy food"* and *"unhealthy food."*

- Explanation of the game: Three schoolchildren represent *the rubbish,* four represent *the unhealthy habits*, and the rest *run normally*. The unhealthy habits catch the normal runners, and those who represent the rubbish catch the unhealthy habits by throwing the balls to colleagues who represent unhealthy habits, to expel them (if they have the ball, they cannot move). If the unhealthy habits catch the normal runners, they signal an unhealthy habit to the other personal goal and on the way back they exchange roles with those who represent the rubbish.
- Grouping: three groups.
- Material: balls, bibs, and sports court.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

Integral Education Through the Body and Movement (35 min).

"**Diet" (10 min).** Game allows neuromotor activation, in addition to the work of the concept of *"diet."*

- Explanation of the game: Students stand in rows of five. The first in each row holds a piece of chalk in their hand. At the teacher's signal, they go to the other end of the gym and write a letter on the ground. They do this until a word related to food is formed. All words must be written in English.
- Grouping: five groups.
- Material: chalk and sports court.
- Variant: add the option of unhealthy eating behaviors.
- Attention to diversity: teacher carries carry out structured, explicit explanations following a prefixed sequence of steps.

"I Classify Food" (10 min). Game allows neuromotor activation, in addition to working on the concept of *"balanced diet."*

- Explanation of the game: At the end of the gym, there are three boxes. The students sort the food cards according to whether they are for the morning, afternoon, or evening, according to the energy each food provides. Students look

at the nutritional value on the food label to see how much energy the food provides. It is necessary for the teacher to insist on the idea of nutritional needs. In the middle of the track, there are benches the students will pass through. This increases the difficulty of the movement.
- Grouping: five groups.
- Material: cards and sports court.
- Variant: add the option to throw the unhealthy food in the trash.
- Attention to diversity: teacher carries carry out structured, explicit explanations following a prefixed sequence of steps.

"**I Make My Healthiest Dish" (10 min).** Game allows neuromotor activation, in addition to working on the concept of *"balanced diet."*

- Explanation of the game: The teams start from the four corners of the field; each team has a corner, with a plate fixed in its corner. The different components of the team move to the center of the court, all at once, and take food cards to form the healthiest plate possible (containing all the nutritional groups). In 2 min, the activity ends. In case several teams have healthy plates, the winner is the team that has the most healthy food.
- Grouping: four groups.
- Material: cards and sports court.
- Variant: make variations according to breakfast, lunch, and dinner.
- Attention to diversity: teacher carries carry out structured, explicit explanations following a prefixed sequence of steps.

Farewell (10 min). Reflection on learning by means of a metacognition ladder based on questions such as What have you learned? What other occasions can you use this information for? How have you learned this information? How has this information helped you?

"**I Represent Food" (5 min).** Students stand in a circle. One person takes a card and represents the food with descriptive words and/or hand gestures. The rest must guess the food and when it is advisable to eat it (e.g., breakfast, lunch, or dinner).

- The teacher ends the session by assigning the next week's roles and talking about personal hygiene.

Second Pedagogical Time

Before students finish, the teacher recommends that for the school blog, students with their friends or family make a classification of the food they find at home depending on when it is advisable to consume it. The aim of this project is for students to develop digital competence.

Session 3. Food Groups

First Pedagogical Time: The Session.

Meeting and Animation (10 min). Welcoming of the group; roll call; presentation of the contents (5 min); practice of games for the critical development of nutrition as an essential value for optimal health, respect for classmates, teachers and material, and active participation and effort.

"**Package-Package" (5 min).** Game allows neuromotor activation, in addition to the work of the concepts of *"food"* and *"nutrient."*

- Explanation of the game: The students run around the track doing the exercise that the teacher indicates (skipping, counter skipping, etc.). At the signal, they pick up a card from the floor and group themselves according to the food group on the card (guided discovery). The students explain that each specific food has certain types of nutrients.
- Grouping: individual.
- Material: cards and sports court.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

Integral Education Through the Body and Movement (35 min).

"**I'm Going to My Food Group" (10 min).** Game allows neuromotor activation, in addition to working on the concept of *"food groups."*

- Explanation of the game: The students run around the track. There are different colored rings: green rings represent vegetables, red rings represent meat, blue rings represent fish,

and yellow rings represent fruit. At the signal, students get into one of these rings. Whoever is outside or confused must go to the sheet of paper and write down a food from that food group.
- Grouping: individual.
- Material: hoops and sports court.
- Variant: change the movement type.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

"**Every Little Owl to Its Own Olive Tree" (10 min).** Game allows neuromotor activation, in addition to working on the concept of *"unbalanced diet."*
- Explanation of the game: The students run in five rows. Each group sorts their food cards into groups: meat-fish, cereals, fruits-vegetables, dairy or legumes. Each box is at the end of the gym.
- Grouping: five groups.
- Material: cards and sports court.
- Variant: include garbage.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

"**Three in a Row of Food" (10 min).** Game allows neuromotor activation, in addition to working on the concept of *"nutrient groups."*
- Explanation of the game: Each group has three cards, of which they classify into nutrient groups. On a signal, one member of each team places a card on the board, which is made up of nine rings fixed at a distance of 5 meters from the starting line. When the partner returns, the next goes out as a relay. Once the cards have been used up, and in the event that no team has managed to make three in a row, another player without a card in their possession comes out and may move one of their team's cards. The objective is to place three foods in a row belonging to that nutrient group.
- Grouping: two groups.
- Material: cards, hoops, and sports court.
- Variant: initial output form

- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

Farewell (10 min). What other occasions can you use this information for? How have you learned this information? How has this information helped you?

"Detecting Food" (5 min). With students sitting in a large group, the teacher holds a basket containing various fruits and vegetables, so that, without being able to see them, the students will discover which foods they are touching. All the students, except one (who is wearing a mask), can see the piece inside the box. They give clues based on the nutrients or calories of the food the masked student has chosen.

- The teacher ends the session by assigning the next week's roles and talking about personal hygiene.

Second Pedagogical Time

Before students finish, the teacher recommends that for the school blog, students with their friends or family make a classification of the food they find at home according to their characteristics. The aim of this project is for students to develop digital competence.

Session 4. Functions of Food

First Pedagogical Time: The Session

Meeting and Animation (10 min). Welcoming of the group; roll call; presentation of the contents (5 min); practice of games for the critical development of nutrition as an essential value for optimal health, respect for classmates, teachers and material, and active participation and effort.

"**Bad Habits Hit" (5 min).** Game allows neuromotor activation, in addition to working on the concept of *"functions of food."*

- Explanation of the game: Four students play the game. They carry a different colored ball and represent the following foods: juices (green ball; unhealthy carbohydrates with lots of sugar), soft drinks (red ball; unhealthy carbohydrates with lots of sugar), pastries (white ball; unhealthy fats with lots of sugar), and pork (blue ball; unhealthy proteins with lots

of fat). The students with the balls throw the balls at their classmates without balls. If students without balls get hit, they must solve questions related to the false food myths. In addition to working on eye–hand coordination (content of the physical education area), they must dispel bad myths.
- Grouping: individual
- Material: balls and sports court.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

Integral Education Through the Body and Movement (35 min).

"**Functions of Food" (10 min).** Game allows neuromotor activation, in addition to working on the concept of *"energetic, plastic, and regulatory."*

- Explanation of the game: Relay races. The students classify the foods according to their functions. To do this, they have cards with food.
- Grouping: in five groups.
- Material: cards and sports court.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

"**Types of Nutrients" (10 min)**. Game allows neuromotor activation, in addition to working on the concept of *"nutrients."*

- Explanation of the game: Students race with balls of different sizes. Carbohydrates and proteins give 4 kcal/g (tennis ball and foam rubber balls) and fats 9 kcal/g (heavier ball). Fiber gives 2 kcal/g (balloon or other). The teacher throws the cards the student bounces the ball and then catches the card. Three students with bibs are *proteins*, *fats*, and *carbohydrates*. If students catch the proteins, they run normally, the fats run very slowly, and the carbohydrates run fastly.
- Grouping: five groups.
- Material: balls and sports court.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

"**Food With Nutrients" (10 min).** Game allows neuromotor activation, in addition to working on the concept of *"food with nutrients."*

- Explanation of the game: Students group food cards according to type of nutrients (carbohydrates, proteins, fiber, minerals, and lipids).
- Grouping: five groups.
- Material: cards and sports court.
- Variant: initial output form
- Attending to diversity: teacher carries out structured, explicit explanations following a preset sequence of steps.

Farewell (10 min). Reflection on learning by means of a metacognition ladder based on questions such as What have you learned? What other occasions can you use this information for? How have you learned this information? How has this information helped you?

"The Circle of Food" (5 min). Students stand in a circle. Each student has two cards with the expressions healthy and unhealthy. In the center of the circle, there is a pile of cards with different foods, nutrients, and drinks. One student goes to the center of the circle, picks a card, and reads it out loud. At that point, classmates point out whether the food is healthy or unhealthy.

- The teacher ends the session by assigning the next week's roles and talking about personal hygiene.

Second Pedagogical Time

Before finishing, the teacher recommends that for the school blog, students with their friends or family at home make an analysis of the impact of this food on the body. The aim of this project is for students to develop digital competence.

Session 5. Sugar: Enemy of a Good Diet

First Pedagogical Time: The Session

Meeting and Animation (10 min). Welcoming of the group; roll call; presentation of the contents (5 min); practice of games for the critical development of nutrition as an essential value for optimal

health, respect for classmates, teachers and material, and active participation and effort.

"**Teeth, Cavities, and Toothbrush" (5 min).** Game allows neuromotor activation, in addition to working on the concept of *"negative consequences of sugar."*

- Explanation of the game: Three pupils represent *teeth*, *tooth decay*, and *toothbrush*. Cavities come from sugar. The students run around the gym. If the student representing sugar catches another student, that student stands on one leg until the toothbrush saves them. If a student gets caught twice, they write on a sheet of paper one food that has a lot of sugar and one that does not.
- Grouping: individual.
- Variation: write down foods that contain little added sugar.
- Material: notebook and sports court.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

Integral Education Through the Body and Movement (35 min).

"**Food Sugar" (15 min).** Game allows neuromotor activation, in addition to working on the concept of *"food sugar."*

- Explanation of the game: Students reflect on the foods they eat in their daily lives and the amount of sugar these foods contain. The recommendations are a maximum of six sugar cubes a day. See how much sugar is in products like a soda. Have a race. In the races you have to see who fills the glasses with sugar first.
- Grouping: five groups.
- Materials: spoons, sugar, cards.
- Variant: type of traversing.
- Attending to diversity: teacher carries out structured, explicit explanations following a preset sequence of steps.

"**Food Scanning" (15 min).** Game allows neuromotor activation, in addition to working on the concept of *"misleading advertising."*

- Explanation of the game: Races in rows. Students analyze and reflect on the misleading advertising offered by apps such as

Nutri-Score or other companies by scanning the food code on the gym's walls.
- Grouping: five groups.
- MATERIAL: TABLETS AND FOOD.
- Attending to diversity: teacher carries out structured, explicit explanations following a preset sequence of steps.

Farewell (10 min). Reflection on learning by means of a metacognition ladder based on questions such as What have you learned? What other occasions can you use this information for? How have you learnedthis information? How has this information helped you?

"**Fads" (5 min).** In a circle, students make a representation of cards to see which nutritional fad is currently being followed (Dukan Diet, Atkins, Rina, etc.). Students consult blogs of reputable people (e.g., http://juanrevenga.com/; www.midietacojea.com) to reflect on their doubts about food.

- The teacher ends the session by assigning the next week's roles and talking about personal hygiene.

Second Pedagogical Time

Before students finish, the teacher recommends that for the school blog, students with their friends or family calculate at home the total amount of sugar they can ingest in a day. The aim of this project is for students to develop digital competence.

Session 6. Feeding: Anatomy and Physiology

First Pedagogical Time: The Session

Meeting and Animation (10 min). Welcoming of the group; roll call; presentation of the contents (5 min); practice of games for the critical development of nutrition as an essential value for optimal health, respect for classmates, teachers and material, and active participation and effort.

"**The Heart Beats" (5 min).** Game allows neuromotor activation, in addition to working on the concept of *"dramatization as a means of expression."*

- Explanation of the game: The heart and blood vessels suffer with sugar and cholesterol. Students explain the heart's

procedure for pumping blood (with and without sugar). Students are in three groups and act out the scenes.
- Grouping: three groups.
- Material: sports court.
- Attention to diversity: teacher carries out structured, explicit explanations following a prefixed sequence of steps.

Integral Education Through the Body and Movement (35 min). "**Oxygen and Red and White Blood Cells" (10 min).** Game allows neuromotor activation, in addition to working on the concept of *"physiological notions."*

- Explanation of the game: The teacher mentions that oxygen and red and white blood cells allow movement and a proper nutrition strengthens them. Then the teacher divides the students into groups. Students stand at one end of the court and run to the other end, all at once, grab a hoop (each group has six hoops), and take it to their area to build a 3D ball that symbolizes the movement.
- Grouping: five groups.
- Material: hoops.
- Variant: symbolize this drawing, but imagine that you have a bad diet.
- Attending to diversity: teacher carries out structured, explicit explanations following a preset sequence of steps.

Oxygen and carbon dioxide" (10 min). Game allows neuromotor activation, in addition to working on the concept of *"breathing and relaxation."*

- Explanation of the game: The teacher divides the class into two groups that each occupy half of the field. There are balls and hoops placed all over the space. The balls represent carbon dioxide and the hoops represent oxygen molecules. The goal is for students to get as many oxygen molecules (hoops) and to kick the carbon dioxide molecules (balls) in the opposite field. To do this, everyone can move all over the field. The hoops must be transported with the foot to their team's half of the field, with the rule that they cannot touch the hoop with their hands. Students can kick with the foot and

only the balls that are in their half of the field. Students can retrieve hoops in the opposite court. No one can stop them. After a few minutes, the teacher stops play and counts the oxygen molecules (hoops) for each group. The group with the most hoops wins. The teacher can also urge students to try to have less carbon dioxide molecules, because these are harmful to health. The teacher can complicate the game by including a player who can eliminate and return the teammates of the opposing team to their field.

- Grouping: two groups.
- Material: hoops, balls, and sports court.
- Variant: symbolize this drawing, but imagine you have a bad diet.
- Attending to diversity: teacher carries out structured, explicit explanations following a preset sequence of steps.

"**Control Your Effort" (10 min).** Game allows neuromotor activation, in addition to working on the concept of *"heartbeat and muscle action."*

- Explanation of the game: The teacher divides the class into five groups. The first group forms a circle by spinning (lungs) and bouncing the blue ball. The second group stands around the first one, bouncing a red ball (oxygen). Ten meters away from them, the third group forms a circle and rotates (heart). Ten meters away from them, the fourth group forms a circle and represents the muscle. A reserve group is left waiting for their intervention when the game starts. At the teacher's signal, the members of the first circle exchange balls with the members of the second group. These bouncing the ball (red) go to the heart, which again opens its arms and lets them pass. The members of the heart take the ball and go to the muscle that receives them by taking the ball and zigzagging through some spades. When analyzing, they go to the reserve group, to whom they give the red balls that they exchange again with the lungs, repeating the cycle of gas exchange, heartbeat, muscular action, and return to the lungs to oxygenate the blood again.
- Grouping: five groups.

- Equipment: hoops, balls, benches, bibs, and sports court.
- Variant: symbolize this drawing, but imagine that you have a bad diet.
- Attending to diversity: teacher carries out structured, explicit explanations following a preset sequence of steps.

Farewell (10 min). Reflection on learning by means of a metacognition ladder based on questions such as What have you learned? What other occasions can you use this information for? How have you learned this information? How has this information helped you?

"Fill Out Questionnaire" (5 min). In a circle, each schoolchild again completes the KIDMED questionnaire (Table 2).

- The teacher ends the session by assigning the next week's roles and talking about personal hygiene.

Second Pedagogical Time

Before the students finish, the teacher recommends that for the school blog, students with their friends or family calculate the sugar they ingest at home. The aim of this project is for students to develop digital competence.

Evaluation and Grading. Taking into account the guidelines of López-Pastor and Pérez-Pueyo (2017), the evaluation is formative (process-oriented and adapted to the students), shared by teacher and students (by means of a common discussion), objective (teacher's notebook), and feasible (organizing the criteria in a coherent way). All this aligns with Order ECD/65/2015, which indicates the need to evaluate the process for the improvement of educational intervention.

The grading referents will be the rubrics (*Resolution of May 13, 2015*) of the evaluation criteria 1 (standard 41 (AA)), 4 (standard 14 (CMCT), 16 (CL) and 30 (CL), 5 (standards 17(CSC), 18, (CMCT), 19 (CSC) and 20 (CMCT) and 7 (standard 38 (CD)). As for the tools, a descriptive scale from 1 to 4 will be used for each criterion. The techniques will be the heteroevaluation for the students' learning and the self-evaluation of the group on its development process.

Table 2
KIDMED Questionnaire in Childhood

Adherence to the Mediterranean diet in infancy	Points
Have a piece of fruit or fresh juice every day.	+1
Have a second piece of fruit every day.	+1
Eat fresh vegetables (salads) or cooked vegetables on a regular basis, once a day.	+1
Eat fresh or cooked vegetables regularly more than once a day.	+1
Consume fish regularly (at least 2–3 times week).	+1
Go once or more a week to a *fast-food* hamburger joint.	-1
He likes legumes and eats them more than once a week.	+1
Eat pasta or rice almost every day (5 days or more a week).	+1
Have a cereal or derivative (bread, etc.) for breakfast.	+1
Eat nuts and dried fruit regularly (at least 2–3 times a week).	+1
Olive oil is used at home.	+1
No breakfast	-1
Have a dairy for breakfast (yogurt, milk, etc.).	+1
Eat industrial pastries, cookies, or cakes for breakfast.	-1
Have 2 yogurts and/or 40 g cheese every day.	+1
Have candy and/or sweets several times a day.	-1

Note. Adapted from "Food, Youth, and the Mediterranean Diet in Spain: Development of KIDMED, Mediterranean Diet Quality Index in children and adolescents," by L. Serra-Majem, L. Ribas, J. Ngo, R. M. Ortega, A. García, C. Pérez-Rodrigo, and J. Aranceta, 2004, *Public Health Nutrition*, *7*(7), p. 932 (https://doi.org/10.1079/PHN2004556).

Conclusion

This manuscript proposes several activities for the knowledge and application of a healthy diet oriented from the area of physical education in the autonomous community of the Canary Islands. In summary, we seek an optimal degree of adherence to the Mediterranean diet to reduce the high prevalence of overweight and obesity, aspects that constitute a serious public health problem worldwide with an increasing trend and pandemic character.

At the same time, we include reflections in the activities to achieve a didactic transposition between the school and the educational center. A person is born with a body and it has to last them in good condition for life. For this reason, physical activity practiced regularly and in the appropriate way, together with dietary control, is the best tool available today to promote the health and quality of life of schoolchildren. In this sense, we paraphrase Aristotle (384–322 B.C.): Acquiring such habits from a young age is not of little importance: it is of absolute importance.

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