



HORIZONTE ACADÉMICO

A Practical Guide for Pre-service Teachers: Implementing Pedagogical Models in Physical Education

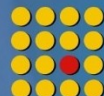
Coords.

María José Maciá-Andreu

Lourdes Meroño

María de la Trinidad Morales-Belando

Carmen Barquero-Ruiz



EGREGIUS
ediciones

A PRACTICAL GUIDE FOR PRE-SERVICE TEACHERS:
IMPLEMENTING PEDAGOGICAL MODELS IN PHYSICAL EDUCATION



A PRACTICAL GUIDE FOR
PRE-SERVICE TEACHERS:
IMPLEMENTING PEDAGOGICAL MODELS
IN PHYSICAL EDUCATION

Coords.

MARÍA JOSÉ MACIÁ-ANDREU

LOURDES MEROÑO

MARÍA DE LA TRINIDAD MORALES-BELANDO

CARMEN BARQUERO-RUIZ





Esta obra se distribuye bajo licencia
Creative Commons Atribución-NoComercial 4.0 Internacional (CC BY-NC 4.0)

Egregius editorial autoriza a incluir esta obra en repositorios institucionales de acceso abierto para facilitar su difusión.

Este libro ha sido sometido a evaluación por pares académicos con el método de doble ciego, así como por parte de nuestro Consejo Editorial. Para más información, véase: <https://egregius.es/editorial/>

This publication is the result of the organisation and development of the Blended Intensive Programme (BIP), *New teaching approaches in European physical education: Learning about and implementing pedagogical models*, with code 2024-1-ES01-KA131-HED-000223217-1 and coordinated by the Catholic University of Murcia (Spain).

A PRACTICAL GUIDE FOR PRE-SERVICE TEACHERS: IMPLEMENTING PEDAGOGICAL MODELS IN PHYSICAL EDUCATION

Diseño de cubierta y maquetación: Francisco Anaya Benítez

© de los textos: los autores

© de la presente edición: Egregius editorial

Sevilla – 2026

N.º 89 de la colección Horizonte Académico

Primera edición, 2026

ISBN: 978-84-1177-252-5

NOTA EDITORIAL: Los puntos de vista, opiniones y contenidos expresados en esta obra son de exclusiva responsabilidad de sus respectivos autores. Dichas posturas y contenidos no reflejan necesariamente los puntos de vista de Egregius editorial, ni de los editores o coordinadores de la obra. Los autores asumen la responsabilidad total y absoluta de garantizar que todo el contenido que contribuyen a la obra es original, no ha sido plagiado y no infringe los derechos de autor de terceros. Es responsabilidad de los autores obtener los permisos adecuados para incluir material previamente publicado en otro lugar. Egregius editorial no asume ninguna responsabilidad por posibles infracciones a los derechos de autor, actos de plagio u otras formas de responsabilidad relacionadas con los contenidos de la obra. En caso de disputas legales que surjan debido a dichas infracciones, los autores serán los únicos responsables.

INDEX

FOREWORD	7
JAVIER FERNÁNDEZ RÍO	

BLOCK I: INCLUSION AND CULTURAL STUDIES ABOUT PEDAGOGICAL MODELS

PART 1.INTRODUCTION TO NEW TEACHING APPROACHES IN PHYSICAL EDUCATION AND SPORT.....	13
PAOLA SBRICCOLI EMANUELE ISIDORI	
PART 2.INCLUSION IN PHYSICAL EDUCATION. CASE STUDY BASED ON IKONS HANDBOOK	21
BRIGITTE MOODY PAOLA SBRICCOLI	
PART 3.CULTURAL STUDIES IN PHYSICAL EDUCATION.....	33
URSULA FREYNE BRIGITTE MOODY	
ASSESSMENT: CASE STUDIES AND QUIZZES	47

BLOCK II: SPORT EDUCATION AND TGFU

PART 1.SPORT EDUCATION.....	57
ANTONIO CALDERÓN LOURDES MEROÑO	
PART 2.TEACHING GAMES FOR UNDERSTANDING.....	85
CARMEN BARQUERO RUIZ MARÍA T. MORALES-BELANDO	
ASSESSMENT: CASE STUDIES AND QUIZZES	III

BLOCK III:
COOPERATIVE LEARNING, ADVENTURE EDUCATION, ATTITUDINAL
STYLE AND SELF-CONSTRUCTION OF MATERIALS

PART 1.COOPERATIVE LEARNING.....	121
ENCARNACIÓN RUIZ LARA	
MARÍA T. MORALES-BELANDO	
LOURDES MEROÑO	
PART 2 .ADVENTURE EDUCATION	141
FRANCISCO SEGADO SEGADO	
AARÓN MANZANARES SERRANO	
PART 3.ATTITUDINAL STYLE.....	173
ENCARNACIÓN RUIZ LARA	
MARÍA T. MORALES-BELANDO	
PART 4.SELF-CONSTRUCTION OF MATERIALS	189
LOURDES MEROÑO	
ENCARNACIÓN RUIZ LARA	
MARÍA T. MORALES-BELANDO	
FRANCISCO JOSÉ CÁNOVAS ÁLVAREZ	
ASSESSMENT: CASE STUDIES AND QUIZZES	205

Physical education is no longer confined to the mere acquisition of motor skills. In the 21st century, it has emerged as a dynamic and multidimensional learning environment, fostering social, cultural, and cognitive competencies that accompany individuals throughout their lives. This book situates itself within this paradigm shift, offering a rigorous and comprehensive exploration of the pedagogical models currently shaping innovation in physical education worldwide.

Structured into three distinct sections, this work provides both theoretical depth and practical guidance. Block I: Inclusion and Cultural Studies about pedagogical models initiates the discussion with a critical reflection on the imperative of inclusive and culturally responsive physical education. It examines frameworks that transcend traditional methodologies, advocating for holistic approaches that promote motor literacy as a lifelong endeavour. Special emphasis is placed on embracing diversity, tailoring practices to individual needs, and harnessing technology as a catalyst for enriched learning experiences.

Block II: Sport Education and Teaching Games for Understanding (TGfU) delves into two globally influential models that have transformed the teaching of sport in physical education. The Sport Education model simulates the dynamics of a sports season, assigning students multifaceted roles—players, coaches, referees—that cultivate cooperation, leadership, and a sense of belonging. Conversely, the TGfU model prioritizes tactical comprehension, encouraging learning through play, decision-making, and strategic thinking in authentic contexts. Together, these approaches equip educators with practical tools to design instructional units that integrate technical proficiency, critical reasoning, and collaborative engagement.

The final section, Block III: Cooperative Learning, Adventure Education, Attitudinal Style, and Self-Construction of Materials, expands the horizon toward methodologies that nurture collaboration, resilience,

and creativity. Cooperative learning fosters positive interdependence and individual accountability within small groups, enhancing both academic achievement and social competence. Adventure education challenges learners in dynamic environments, cultivating confidence, leadership, and teamwork. The attitudinal style seeks to inspire motivation that leads to autonomous physical activity, while self-construction of materials transforms students into creators of their own resources, stimulating creativity and independent learning.

Collectively, these three sections offer a profound and forward-looking perspective on pedagogical innovation in physical education for pre-service teachers. By integrating theory, practice, and critical reflection, this book constitutes an invaluable resource for educators, researchers, and students committed to reimagining teaching as an inclusive, dialogic, and transformative process.

Far from being a mere manual of applied pedagogy, this work is an invitation to reconceptualize physical education as a space for encounter, dialogue, and personal growth—a space where every learner can discover their potential, embrace diversity, and engage meaningfully with the world.

JAVIER FERNÁNDEZ RÍO
University of Oviedo, Spain

BLOCK I: INCLUSION AND CULTURAL STUDIES ABOUT PEDAGOGICAL MODELS

ALESSANDRA FAZIO (COORD.)
University of Foro Italico, Italy
alessandra.fazio@uniroma4.it

EMANUELE ISIDORI
University of Foro Italico, Italy

ANGELA MAGNANINI
University of Foro Italico, Italy

PAOLA SBRICCOLI
University of Foro Italico, Italy

BRIGITTE MOODY
University of Limerick, Ireland

URSULA FREYNE
University of Limerick, Ireland

1. STRUCTURE OF BLOCK I

BLOCK TITLE	<i>Block I: Inclusion and Cultural Studies about Pedagogical Models</i>
DESCRIPTION	This block is an introduction to new teaching approaches in Physical Education (PE) and sport. This block is subdivided into three parts devoted to main pedagogical theories and models for an integrated model of PE teaching with specific attention to social inclusion and cultural studies.
LEARNING OUTCOMES	Learners will: Understand and analyse new pedagogical models, theories and approaches for innovative PE teaching and Sport Education. Be able to explain the shift from traditional skill-focused PE to more holistic, student-centred, and context-based approaches that promote lifelong physical literacy and interdisciplinary learning. Explore inclusive and culturally responsive pedagogy in PE and not only understand inclusive pedagogical approaches but also adapt them to different needs of students in PE settings. Promote inclusion and cultural understanding. Assess the role of technology in PE. Learners will evaluate the impact of technological innovations, including wearable fitness trackers, virtual reality, and digital platforms, on the teaching and learning processes in PE, particularly to enhance engagement and personalized learning.
LEARNING ACTIVITIES	Online seminar (mandatory). Reading (mandatory). Case study (mandatory). Quiz (mandatory). Additional readings (optional).
ASSESSMENT	Quiz 10 multiple-choice questions. Case study.
DURATION	1 ECTS.
TEACHING METHODS AND TECHNIQUES	Blended learning. Case studies. Collaborative learning spaces. Forum and discussion groups.
MATERIALS	Support resources for the student, such as handouts, articles, videos, handbooks, etc.

- PART 1 -

INTRODUCTION TO NEW TEACHING APPROACHES IN
PHYSICAL EDUCATION AND SPORT

PAOLA SBRICCOLI
University of Foro Italico, Italy

EMANUELE ISIDORI
University of Foro Italico, Italy

1. INTRODUCTION

In recent decades, the field of PE and sport has undergone a crucial transformation. As educational systems struggle with changing societal demands, shifts in pedagogical thinking, and increased recognition of the role of physical activity in promoting holistic well-being, there has been a growing interest in developing innovative teaching approaches that reflect these priorities. The traditional, skill-focused methods of teaching PE and sport, which primarily emphasised physical performance and technical proficiency, are increasingly being integrated - or replaced - by more student-centred, inclusive, and context-based approaches that aim to develop not only physical capabilities but also cognitive, social, and emotional competencies.

These changes are complemented by broader educational reforms worldwide that promote lifelong learning, inclusivity, cultural-bound and interdisciplinary teaching. Consequently, the reform of PE and sport education has focused on fostering a more dynamic and adaptable curriculum that meets the needs of diverse student populations, integrates cross-disciplinary learning, and encourages active participation beyond traditional physical activities. This new direction in PE has led to the development of pedagogical models that emphasize holistic development, social inclusion, cultural diversity, and lifelong engagement with physical activity.

2. THEORY, STRUCTURE, CORE ELEMENTS, AND BENEFITS

One of the most significant pedagogical innovations in PE has been the shift towards holistic learning and the promotion of physical literacy. Physical literacy, a concept popularised by Margaret Whitehead (2001), goes beyond the traditional view of PE as the development of physical skills, focusing instead on a person's motivation, confidence, physical competence, knowledge, and understanding to maintain physical activity throughout life. This concept has gained significant traction in Europe, where national curricula in countries like the UK, Finland, and France now emphasise the development of lifelong physical literacy over short-term performance outcomes.

In contrast to traditional models, which might assess students primarily on their ability to perform specific movements or sports techniques, the physical literacy model recognizes the broad spectrum of physical, cognitive, and emotional benefits that come from engaging with physical activity. This approach encourages students to see physical activity not just as something done in a school setting but as a fundamental part of their overall well-being, capable of fostering self-confidence, social engagement, and long-term health. By nurturing this mindset, physical literacy equips students with the skills and motivation to lead active, healthy lives well beyond their school years.

2.1. Student-Centred Learning and Constructivist Approaches

Another hallmark of the new pedagogical trends in PE and sport education is the constructivist approach, which places the student at the centre of the learning process. In the constructivist model, learning is seen as an active process where students build their own understanding and knowledge through experiences, reflection, and social interaction. This approach has found its way into PE through models like Teaching Games for Understanding (TGfU), Sport Education, and Game Sense, which focus on developing students' tactical understanding, decision-making skills, and reflective thinking through game-based learning.

In TGfU, an approach that originated in the UK and has gained widespread acceptance in Europe, students are encouraged to engage with games in a way that promotes critical thinking and strategic problem-solving. Instead of focusing on isolated skills and techniques, TGfU emphasizes the importance of understanding the rules, tactics, and strategies of games, allowing students to make informed decisions and adapt their behaviour to different contexts. This method fosters deeper cognitive engagement and moves away from the traditional, performance-based assessment models that often dominated PE in the past. Regarding pedagogical theories for teaching sports and PE based on the TGfU approach, it should be highlighted that this approach is based on the following principles:

- Constructivist Learning Theory.
- Inquiry-Based Learning.

- Social Learning and Collaboration.
- Situated Learning.
- Reflective Practice.

The Sport Education model, pioneered by Daryl Siedentop (1987), is another example of a student-centred approach being integrated into European PE curricula. This model aims to replicate the experience of participating in real-world sports by organizing students into teams and creating a season-like structure where they take on various roles, such as coaches, referees, and players. The focus is not solely on playing the sport but also on developing leadership, teamwork, and organizational skills, which are vital for students' broader educational development. This model has been widely adopted across Europe due to its emphasis on fostering engagement, responsibility, and collaboration among students.

2.2. Inclusive Pedagogies in Physical Education

Inclusivity is a key subject driving new approaches to PE. Traditional PE models have often been criticised for marginalising certain groups of students, particularly those with disabilities, lower physical ability, or cultural differences. In response, many European educational systems are adopting inclusive pedagogies that ensure all students, regardless of ability, background, or socio-economic status, can participate meaningfully in PE.

In countries like Sweden, Norway, and the Netherlands, inclusive PE practices are being embedded in national curricula to address the diverse needs of students. These approaches focus on adapting activities and modifying rules so that all students can participate on equal terms. For example, Universal Design for Learning (UDL) is gaining traction as a framework for designing PE activities that are accessible to all students. UDL promotes flexibility in teaching methods, offering multiple means of engagement, representation, and expression, so that students with different abilities and learning preferences can succeed.

Inclusion in PE also extends to promoting gender equity and cultural responsiveness. European initiatives like the Erasmus+ program, which funds projects aimed at promoting gender equality and inclusion in

sport, have been pivotal in developing resources and training programs for teachers. These initiatives ensure that teachers are equipped to challenge stereotypes and create environments where students from all genders and cultural backgrounds feel valued and included.

2.3. Culturally Responsive Teaching in Sport

As classrooms become increasingly diverse, the importance of Culturally Responsive Teaching (CRT) in PE has gained prominence. Culturally responsive pedagogy, a concept rooted in the work of scholars such as Geneva Gay (2018) and Gloria Ladson-Billings (1995), involves recognizing, respecting, and incorporating students' cultural backgrounds into the teaching and learning process. This approach has been integrated into PE curricula to ensure that sport and physical activity are relevant and meaningful to all students, particularly those from minority ethnic and cultural groups.

Culturally responsive teaching in PE involves designing curricula that reflect the cultural practices, values, and interests of diverse student populations. For example, in schools with large immigrant populations, educators may incorporate sports and physical activities that are popular in students' countries of origin. This not only makes PE more engaging for these students but also fosters cultural exchange and mutual understanding among peers. Additionally, CRT encourages teachers to critically reflect on their own cultural biases and to create learning environments that challenge ethnocentric assumptions and celebrate diversity.

2.4. Interdisciplinary and Cross-Curricular Approaches

One of the most innovative trends in PE is the move towards interdisciplinary and cross-curricular approaches that integrate physical education with other subject areas. In an era where educational systems are increasingly focused on developing well-rounded individuals who possess a broad range of skills, PE is being positioned not only as a means of developing physical competencies but also as a vehicle for enhancing cognitive, emotional, and social development.

Countries like Finland have led the way in developing phenomenon-based learning, where PE is integrated with subjects such as mathematics, science, and history to create interdisciplinary learning experiences. For example, students might learn about the physics of movement through sports, or they may explore historical and cultural aspects of certain games and sports. This approach not only enhances students' understanding of physical activity but also reinforces learning in other subjects, making education more holistic and interconnected.

2.5. Technological Integration in Physical Education

The rise of digital technology has also left its mark on PE teaching practices. In response to the growing influence of technology in all areas of education, new teaching approaches in PE are increasingly incorporating digital tools and resources to enhance learning and engagement. Wearable technology, such as fitness trackers, and mobile apps that monitor physical activity have been introduced in PE classes to help students set personal fitness goals, track their progress, and receive real-time feedback on their performance.

Moreover, Virtual and Augmented Reality (VR/AR) are being explored as tools to create immersive learning environments that can simulate real-life sports scenarios, allowing students to practise techniques and strategies in a safe and controlled environment. Digital platforms that enable students to analyse their movements, review their performance, and engage in interactive learning experiences are becoming part of the modern PE landscape, particularly in countries like Denmark and Germany, where innovation in education technology is being heavily promoted.

In this framework, it is important to briefly introduce pedagogical models for social inclusion and cultural studies in education that will be further developed later. In fact, the field of education has increasingly recognized the necessity of incorporating pedagogical models that promote social inclusion and address cultural diversity. As societies become more interconnected through globalisation, migration, and digital communication, educators face the pressing need to design and implement teaching strategies that are inclusive, culturally responsive, and sensitive to the

complexities of identity, power, and social dynamics. Educational systems are no longer seen merely as mechanisms for imparting academic knowledge but as vital spaces where students from diverse backgrounds can engage with each other, develop social and emotional competencies, and learn to navigate cultural differences. This shift has given rise to a range of pedagogical models that explicitly focus on social inclusion and cultural studies, emphasising the role of education in fostering equity, social justice, and a deep understanding of cultural dynamics.

The transformation of PE and sport reflects a broader shift towards more inclusive, interdisciplinary, and student-centred approaches to teaching and learning. New pedagogical models in PE prioritise the holistic development of students, focusing not only on physical skills but also on cognitive, social, and emotional growth. The integration of culturally responsive teaching, inclusive practices, and interdisciplinary approaches reflects Europe's commitment to creating educational systems that are adaptable, equitable, and relevant in an increasingly diverse and complex world. As these new teaching approaches continue to evolve, they hold the potential to reshape the way students engage with physical activity, fostering lifelong engagement with health and well-being while promoting inclusivity and cultural understanding.

3. REFERENCES

- Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice (3rd Edition)*. Teachers College Press, Columbia University.
- Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32(3), 465–491. <https://doi.org/10.3102/00028312032003465>
- Siedentop, D. (1987). The theory and practice of sport education. *Myths, Models and Methods in Sport Pedagogy*, 79–86.
- Whitehead 1, M. (2001). The concept of physical literacy. *European Journal of Physical Education*, 6(2), 127–138. <https://doi.org/10.1080/1740898010060205>

-PART 2-

INCLUSION IN PHYSICAL EDUCATION. CASE STUDY BASED
ON IKONS HANDBOOK

BRIGITTE MOODY

University of Limerick, Ireland

PAOLA SBRICCOLI

University of Foro Italico, Italy

1. INTRODUCTION

Central to this discussion is the concept of social inclusion, which refers to the process of improving the terms of participation in society, particularly for people who are disadvantaged based on identity, socio-economic status, or cultural background. In the context of education, social inclusion requires pedagogical strategies that ensure all students, regardless of their race, ethnicity, gender, sexual orientation, ability, or socio-economic status, have equitable access to learning opportunities. One of the key educational theories that underpins inclusive pedagogy is critical pedagogy, developed by Brazilian educator Paulo Freire. Freire's work, particularly his seminal text *Pedagogy of the Oppressed* (1970), advocates for a teaching approach that empowers marginalised communities by encouraging critical reflection on social inequalities. Freire's model of dialogical education emphasises the need for educators to engage in a two-way dialogue with students, where learners are active participants in their own education, and where the knowledge shared reflects the lived realities of all students, not just those from privileged backgrounds.

2. THEORY, STRUCTURE, CORE ELEMENTS, AND BENEFITS

Inclusion in PE is rooted in social justice, equity, and human rights theories, emphasising the value of diversity and the right of all individuals to participate in and benefit from physical activity. It aligns with:

1. **Social Model of Disability:** This theory shifts the focus from an individual's impairments to the environmental and societal barriers that limit participation. It advocates for removing these barriers to create equitable opportunities for all.
2. **Constructivist Learning Theory:** Emphasises the role of active participation and personal experience in learning. Inclusive PE integrates this by designing activities where all students contribute and learn collaboratively.
3. **Universal Design for Learning (UDL):** UDL principles advocate for adaptable teaching methods that cater to diverse learning styles, abilities, and needs.

4. Self-Determination Theory: Encourages autonomy, competence, and relatedness, aiming to foster intrinsic motivation among all students, regardless of ability.

Core components of inclusive PE:

1. Accessible Curriculum: Activities are modified to accommodate all students. This includes adaptive equipment, rule changes, or varied teaching methods to ensure full participation.
2. Collaboration: Effective inclusion involves collaboration among teachers, support staff, parents, and sometimes peers to create an inclusive environment.
3. Differentiated Instruction: Tailoring lessons to meet the diverse needs of students while maintaining the lesson's integrity.
4. Fostering Social Inclusion: Encouraging teamwork and peer interactions to build a sense of belonging and reduce stigma.
5. Assessment and Feedback: Continuous assessment helps understand individual needs, track progress, and adjust teaching strategies.
6. Professional Development: Training educators to recognize and address barriers to inclusion and develop the skills needed for adaptive teaching.

Benefits of inclusion in PE:

1. Physical Benefits:
 - Promotes physical activity for all, improving health and fitness.
 - Enhances motor skills for students with disabilities.
2. Social Benefits:
 - Encourages teamwork, empathy, and mutual respect among peers.
 - Reduces stereotypes and promotes acceptance of diversity.

3. Cognitive and Emotional Benefits:
 - Builds self-esteem and confidence.
 - Provides opportunities for problem-solving and creativity through adaptive activities.
4. Inclusive Community:
 - Creates a sense of belonging and equitable participation.
 - Prepares all students to live and work in diverse environments.

Accessing relevant information:

1. Professional Organisations:
 - The Society of Health and Physical Educators (SHAPE America) provides guidelines, research, and resources on inclusive PE.
 - International organisations like Special Olympics Unified Sports and Inclusive Fitness Initiative.
2. Research Journals and Publications:
 - Journals such as Adapted Physical Activity Quarterly (APAQ) and Journal of Physical Education, Recreation & Dance (JOPERD).
3. Government and Policy Documents:
 - Look for educational inclusion policies in your region.
 - The United Nations' Convention on the Rights of Persons with Disabilities (CRPD) is a key document supporting inclusive practices.
4. Workshops and Training:
 - Online courses and certifications in adaptive physical education are widely available.
 - Conferences and seminars by organisations such as NASPE (National Association for Sport and Physical Education).

5. Educational Websites and Resources:

- Websites like PE Central or OpenPhysEd.org offer inclusive teaching strategies and lesson plans.

3. PRACTICAL RESOURCES ABOUT HOW TO APPLY AND ADAPT PEDAGOGICAL MODELS

3.1. Inclusive Strategies and Tools for Adapting Pedagogical Models in Physical Education

1. The TREE Model for Activity Adaptation:

The TREE model is a flexible framework for modifying activities to accommodate all learners:

- Teaching Style: Adapt instructions, provide visual aids, or allow peer tutoring to meet different learning styles.
- Rules: Simplify rules or create variations to ensure equitable participation (e.g., allowing multiple tries for scoring).
- Equipment: Use modified equipment, such as lighter balls or larger targets, to match students' abilities.
- Environment: Modify the physical setup, such as using a smaller play area or ensuring wheelchair accessibility.

Resources:

- Sport Australia offers detailed activity cards and examples of the TREE model in action. Visit their site for free materials: Sport Australia (<https://www.ausport.gov.au/>).
- Teacher Magazine (https://www.teachermagazine.com/au_en/articles/strategies-to-promote-inclusion-in-health-and-physical-education-and-beyond).

2. Differentiated Instruction and Universal Design:

- Create multiple entry points for students with diverse abilities.
- Incorporate stations or task cards with different levels of challenge so students can work at their skill level.

- Provide choice in roles (e.g., scorer, coach, or player) to engage students meaningfully.

Resources:

- The Inclusive Schools Network offers guides on differentiated instruction and Universal Design for Learning: Inclusive Schools Network (<https://inclusiveschools.org/>).

3. Peer-Assisted Learning and Cooperative Activities:

- Implement peer-assisted learning where students with advanced skills mentor others.
- Use cooperative games that require teamwork and shared goals, fostering inclusion and social skills. Example: A relay game where all team members must contribute equally ensures balanced participation.

Resources:

- Explore collaborative strategies in PE through resources provided by SHAPE America: SHAPE America (<https://www.shapeamerica.org/>).

4. Assessing Students in Inclusive PE:

- Offer multiple assessment methods, such as video submissions, written reflections, or live demonstrations, to cater to diverse abilities.
- Focus on personal improvement rather than competition, using self-paced goals and progress tracking.

Resources:

- Teacher Magazine outlines strategies for adaptive assessments in PE: Teacher Magazine (<https://www.teachermagazine.com/>).

5. Seven Pillars of Inclusion Framework:

Developed by Play by the Rules, this framework ensures a holistic approach to inclusion:

- Access: Ensure physical and social accessibility.
- Attitude: Promote positive attitudes toward diversity among staff and students.
- Choice: Provide flexible options for participation.
- Partnerships: Work with families, specialists, and the community.
- Communication: Use clear, inclusive language and visual supports.
- Policy: Establish policies that support inclusion.
- Opportunities: Create equitable participation opportunities for all.

Resources:

- Play by the Rules (<https://www.playbytherules.net.au/>).
- Teacher Magazine (https://www.teachermagazine.com/au_en/articles/strategies-to-promote-inclusion-in-health-and-physical-education-and-beyond).

6. Professional Development Opportunities:

- Attend workshops or online courses on adaptive physical education.
- Engage with organisations like the Special Olympics, which offer free professional development resources for teachers.

Resources:

- Special Olympics Australia (<https://www.specialolympics.com.au/>) for training programs focused on inclusion.

7. Culturally Inclusive Practices

Incorporate games and activities that respect and reflect the cultural diversity of your students. Resources like Yulunga (Indigenous Australian games) can provide a starting point.

Resources:

- Explore Indigenous games and inclusion strategies at Sport Australia's Yulunga Games.

8. Technology Integration:

- Use apps and tools designed for inclusive education, such as visual timetables or fitness trackers with adaptive settings.
- Virtual reality can simulate movement-based activities for students with mobility challenges.

Resources:

- Review technology-based strategies for inclusion at Inclusive Schools Network (<https://inclusiveschools.org/>).

3.2. IKONS Methodology: Theoretical Bases and Tools

The methodology described above was validated through the IKONS Project (Inclusive Karate: A New Perspective to Decrease Sedentary Lifestyle and Increase Self-Confidence in Down Syndrome, co-financed by the EU in the framework of the Erasmus + Sport Programme), and successfully applied to people with Down Syndrome (DS) (<https://www.ikons-project.eu/>).

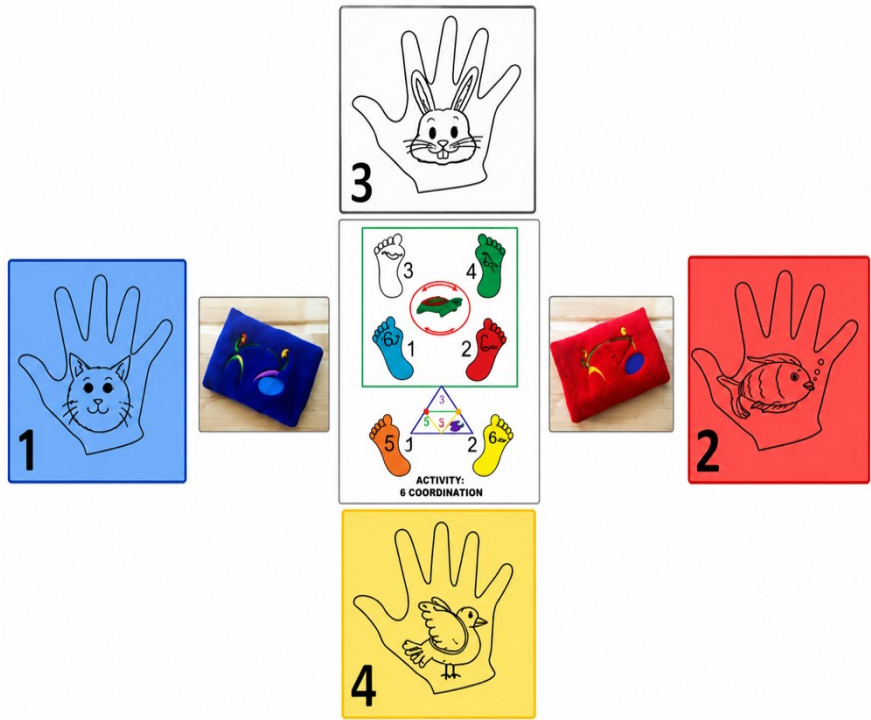
The approach proposed and applied to DS individuals in the IKONS project has been ideated for people with intellectual disabilities and motor learning development impairment. Subjects involved do not necessarily have to have practiced either martial arts or karate before, since this approach system is unique and one of a kind, not comparable with other disabled martial arts sports (I-Karate Global, 2021).

The methodology used in this training program, which takes advantage of the use of special tools (pictograms, coloured cards, drawings, and symbols), has shown a positive impact on motor learning processes that are possibly impaired in individuals with autistic spectrum disorders. The room where the training sessions should be performed has to be a minimum of 8 x 5 meters; it is not necessary that there are mats on the floor, but the floor needs to be free of obstacles. When training on the mats with pictograms, subjects can leave the socks on.

Out of practical experience using this method, the aim is to find a way to trigger these people into sport and contribute to promoting social inclusion and improvement in daily physical activity. The methodology takes

advantage of combining the stimulation of the motor learning skills by the brain, with movement and breathing. Namely, this is referred to as Movement-Breathing-Thinking (MBT). Thus, the main principles of this training method are related to teaching how to control breathing while exercising in an understandable way, and the use of special tools (pictograms, coloured cards, drawings, and symbols) that have been specifically designed by IKFI Belgium (Figure 1).

FIGURE 1. Example of special tools (pictograms, coloured cards, drawings and symbols).



Source: Own elaboration

Learning to control breathing, in combination with recognizing pictograms on the cards located forwards and backwards, and pictograms at the sides of the venue that they have to move in four directions, represents for individuals an interesting challenge. During the training sessions, individuals should wear a red and blue bracelet (on the right and left side, respectively), as left and right could be difficult for some of them to understand.

The possibility for subjects to use pictograms positioned on the floor and at the sides for their movement on the floor helps them to move easily and more comfortably. In fact, pictograms are more understandable and recognizable than colours and numbers. Subjects can remember easily where the pictograms are situated, and practice and perform more quickly a sequence of movements. This kind of work makes it easier for subjects to better understand and memorize the sequences, and this can lead to an improvement and acceleration of motor learning in people with intellectual disabilities. This training method was applied with the aim of helping intellectually and motor disabled people to improve their motor learning through an adapted activity. Most of all, this would represent a great step for helping and promoting the inclusion of people with locomotor and/or intellectual deficits in everyday life and give them a bigger chance to integrate in their society through adapted sport practice (Quinzi et al., 2021; Quinzi et al., 2022a,b).

4. REFERENCES

- Freire, P. (1970). *Pedagogy of the Oppressed*. Bloomsbury Academic.
- I-Karate Global. (2021). *IKONS. Inclusive Karate: A new perspective to decrease sedentary lifestyle and increase self-confidence in Down Syndrome. IO2-Manual for the adaptive training. IO3- Video resources*. https://www.ikons-project.eu/wp-content/uploads/2021/03/IKONS_IO2-3_ENG.pdf
- Quinzi F., Camomilla, V., Bratta, C., Piacentini, M. F., Sbriccoli, P. & Vannozzi, G. (2021). Hopping skill in individuals with Down syndrome: A qualitative and quantitative assessment. *Human Movement Science*, 78, 102821. <https://doi.org/10.1016/j.humov.2021.102821>
- Quinzi F., Sbriccoli, P., Camomilla, V., Piacentini, M.F., & Vannozzi, G. (2022a). Assessing kicking motor competence in individuals with Down's syndrome through wearable motion sensors. *Journal of Intellectual Disability Research*, 66(6), 558-567. <https://doi.org/10.1111/jir.12914>
- Quinzi F., Camomilla, V., Piacentini, M.F., Boca, F., Bortels, E., Kathrein, E., Magyar, A., Verdone, F., Vannozzi, G. & Sbriccoli, P. (2022b). Motor competence in individuals with Down syndrome: is an improvement still possible in adulthood? *International Journal of Environmental Research and Public Health*, 19(4), 2157. <https://doi.org/10.3390/ijerph19042157>

-PART 3-

CULTURAL STUDIES IN PHYSICAL EDUCATION

URSULA FREYNE

University of Limerick, Ireland

BRIGITTE MOODY

University of Limerick, Ireland

1. INTRODUCTION

A crucial aspect of inclusive pedagogy is its focus on creating learning environments that are culturally responsive. Culturally responsive pedagogy, as defined by scholars such as Gay (2018) and Ladson-Billings (1995), stresses the importance of acknowledging and valuing the cultural backgrounds of students in the learning process. This model calls for curricula and teaching practices that are relevant to students' cultural experiences, and that challenge the dominance of Eurocentric narratives in education. The goal is not simply to include diverse cultural perspectives but to centre these perspectives as integral to the learning experience. In doing so, culturally responsive pedagogy seeks to decolonize education, dismantling the hierarchical structures that have historically marginalised non-Western knowledge systems and ways of knowing.

In tandem with these approaches, intersectionality has emerged as a critical framework for understanding how various forms of identity and social stratification (such as race, gender, class, and disability) intersect to create unique experiences of oppression and privilege. Crenshaw (2019), in the late 1980s, theorised intersectionality as a way to provide a theoretical lens through which educators can examine the complexities of identity and recognize how students experience the education system in multifaceted ways. Inclusive pedagogical models that adopt an intersectional approach focus on recognizing the multiple dimensions of identity that shape students' experiences in the classroom. This recognition enables educators to address not only cultural diversity but also the interplay of systemic inequalities that differentially affect students based on the convergence of various social categories.

Moreover, Social-Emotional Learning (SEL) has become a key component of pedagogical models aimed at promoting social inclusion. SEL emphasises the development of emotional intelligence, empathy, and interpersonal skills, which are essential for students to engage in meaningful and respectful interactions in diverse classroom environments. Research in cultural studies has shown that fostering these competencies can help reduce prejudices, build cross-cultural understanding, and equip students with the tools to navigate social conflicts productively.

SEL frameworks integrate emotional and social dimensions into academic learning, recognizing that students cannot fully engage with educational content unless they feel emotionally supported and socially connected within the learning environment. Inclusive pedagogies, therefore, incorporate strategies for building positive relationships, fostering a sense of belonging, and promoting emotional resilience, particularly for students from marginalised or vulnerable backgrounds.

Multicultural education also plays a significant role in models that focus on social inclusion and cultural studies. Developed in response to the increasing cultural and ethnic diversity in schools, multicultural education promotes the recognition, celebration, and inclusion of diverse cultural perspectives in the curriculum. Considering Banks' (2009) and Nieto's (2017) studies, advocates for a pluralistic approach, where the unique cultural backgrounds of all students are respected and included in the learning process, thus struggling against the traditional "melting pot" model of assimilation, which implies that students from minority cultures should conform to the dominant culture.

Multicultural education is not limited to content about different cultures but also involves fostering cultural competence, that is, the ability to understand, communicate, and interact effectively with people from different cultural backgrounds.

At the intersection of these inclusive pedagogies is the concept of critical multiculturalism, which merges the goals of multicultural education with the critical analysis of power relations central to critical pedagogy. Critical multiculturalism recognizes that while celebrating cultural diversity is important, it is equally crucial to address the social, political, and economic inequalities that underpin cultural differences. As such, it calls for an educational approach that not only incorporates diverse perspectives but also critiques the social structures that lead to marginalisation and exclusion. This approach aligns with the broader goals of social justice education, which seeks to empower students to become active agents of change by critically examining issues of oppression, privilege, and equity.

Culturally sustaining pedagogy, a more recent development in the field, goes beyond cultural responsiveness by advocating for the preservation and promotion of students' cultural practices within the educational system. As theorised by Paris (2012), this pedagogy resists the pressure for students from minority backgrounds to assimilate into dominant cultural norms and instead seeks to sustain and nurture their linguistic, cultural, and artistic practices. In this way, culturally sustaining pedagogy aligns with the broader goals of cultural studies, which seek to interrogate how culture shapes identities, social practices, and power dynamics.

Summing up, pedagogical models for social inclusion and cultural studies represent a significant evolution in the field of education, aiming to create more equitable, culturally responsive, and socially fair learning environments. These models, rooted in critical pedagogy, culturally responsive teaching, intersectionality, and social-emotional learning, seek to address the systemic inequalities that affect marginalised students while fostering a deeper understanding of cultural diversity. By incorporating these pedagogical approaches, educators can play a pivotal role in promoting social justice, inclusion, and equity in the classroom, ultimately preparing students to navigate and contribute to an increasingly diverse and interconnected world. These inclusive pedagogical frameworks not only respond to the challenges of contemporary education but also promote a more inclusive and culturally aware society.

2. THEORY, STRUCTURE, CORE ELEMENTS, AND BENEFITS

2.1. Theoretical Foundations of the Cultural Studies Model in Physical Education

The Cultural Studies Model (CSM) in PE originates from cultural studies and critical theory—fields that analyse how culture, power, and society influence human behaviour and experience. This model is grounded in key theorists like Hall (1997), who studied cultural representation, identity, and power dynamics, as well as Freire's concept of critical pedagogy (Freire, 1970). These theories suggest that education is not just a means of transferring knowledge or skills but also a platform for engaging students in critical reflection on the social structures that shape their experiences.

- Cultural Representation and Identity: Hall’s work on cultural representation argues that society communicates and reinforces social norms, values, and identities through media, art, and education. CSM encourages students to see sports and physical activity as more than mere competition; instead, they can explore how sports represent broader social values, such as masculinity, nationalism, and race (Hall, 1997).
- Critical Pedagogy and Empowerment: Freire’s critical pedagogy calls for education that helps individuals become aware of social inequalities and empowers them to challenge oppressive systems. Applying this to PE, CSM enables students to critically engage with physical culture—analysing why certain sports are popular, how gender and race affect participation, and the role of media in shaping our perceptions of "ideal" physical activity (Freire, 1970).

CSM, therefore, emphasises a holistic approach to PE that includes intellectual and social-emotional dimensions, not just physical development. It enables students to investigate how their identities, experiences, and societal structures impact their views of physical activity, helping them to develop more informed, critical perspectives.

2.2. Core Components of the Cultural Studies Model in Physical Education

The CSM can be divided into several core components that guide its implementation in a PE curriculum. These components include critical inquiry, identity exploration, social critique, media literacy, and active engagement.

1. Critical Inquiry: This component encourages students to ask questions about the socio-cultural dimensions of physical activity. For example, students might investigate why certain sports are associated with specific genders, or how physical education programs differ across cultures. Inquiry fosters a questioning mindset, inviting students to critically examine the values associated with physical activity (Laker, 2003).

2. **Identity Exploration:** In this model, students are encouraged to explore how their identities (e.g., gender, race, socioeconomic background) influence their experiences with and perceptions of sports and physical activity. This awareness can promote personal growth, allowing students to reflect on their own beliefs and biases regarding fitness, sports, and body image (Azzarito & Solomon, 2006).
3. **Social Critique:** CSM promotes analysis of the societal structures that shape physical culture. For example, students may explore how sports organisations often prioritise male-dominated sports or how media portrayals of athletes reinforce stereotypes. This component aims to help students recognize systemic inequalities in sports and physical activity (Wright, 2004).
4. **Media Literacy:** With media playing a central role in shaping cultural attitudes toward sports, students in CSM are taught to analyse media representations critically. For instance, they might study advertising campaigns, news coverage, and movies to understand how athletes are portrayed based on gender, race, or nationality. Media literacy within the CSM framework helps students become more discerning consumers of media content and more aware of how these portrayals impact societal attitudes (McDonald & Birrell, 1999).
5. **Active Engagement:** Finally, CSM encourages students to apply their learning to real-world settings. They might participate in community sports programs, engage in discussions on policy changes for inclusivity in sports, or lead awareness campaigns. Active engagement moves beyond theory, allowing students to apply critical thinking and cultural awareness in practical, meaningful ways (Penney, 2002).

2.3. Benefits of the Cultural Studies Model in Physical Education

The CSM offers numerous benefits, aligning with educational goals that promote lifelong learning, empathy, and social responsibility. Here are some key benefits of integrating CSM in PE.

1. **Enhanced Critical Thinking:** The CSM approach encourages students to think deeply about the societal and cultural contexts of physical activity. It moves PE beyond a skills-based curriculum and fosters critical thinking, which students can apply to broader social issues beyond the gymnasium (Laker, 2003).
2. **Improved Social and Cultural Awareness:** By studying cultural influences on sports, students develop an understanding of diversity and cultural relativity, which is essential in today's globalised world. This increased awareness can reduce biases, encourage empathy, and promote a more inclusive perspective toward people with different backgrounds and abilities (Wright, 2004).
3. **Promoting Inclusivity and Empowerment:** Traditional PE often reinforces competitive or hierarchical models of success. The CSM approach, by contrast, encourages inclusivity and acknowledges diverse abilities, making PE a more welcoming space for students who might otherwise feel marginalised. The model fosters a sense of empowerment as students see themselves represented and validated in the curriculum (Azzarito & Solomon, 2006).
4. **Media Literacy and Informed Decision-Making:** Students in CSM learn to evaluate media critically, developing the ability to distinguish between positive and negative portrayals of physical fitness and health. Media literacy equips students with tools to resist unrealistic body standards or consumerist messages related to sports and fitness products, fostering healthier, more authentic views on physical activity (McDonald & Birrell, 1999).
5. **Support for Lifelong Engagement in Physical Activity:** By connecting physical activity to personal, social, and cultural experiences, CSM can instil in students a more meaningful and sustainable relationship with physical activity. Understanding that sports and fitness are not only about physical

ability but also about community, identity, and empowerment may encourage lifelong engagement (Penney, 2002).

2.4. Accessing Information on the Cultural Studies Model

There is a growing body of research and resources available for educators interested in the CSM in PE. Key sources include academic journals such as *Physical Education and Sport Pedagogy* and *Quest*. Additionally, books like *Physical Education: Essential Issues* by Anthony Laker (2003) and *Sport, Physical Culture, and the Moving Body* by Joshua I. Newman, Holly Thorpe, and David L. Andrews (2020) provide theoretical and practical insights into cultural studies approaches in PE.

Databases like JSTOR, ERIC, and Google Scholar are invaluable for locating peer-reviewed articles on CSM. For those implementing CSM in a school setting, resources from educational organisations like the American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD) offer relevant tools and support for culturally inclusive PE programs.

2.5. Conclusion

The CSM in PE enriches traditional PE by fostering cultural awareness, critical thinking, and inclusivity. Grounded in cultural studies and critical pedagogy, CSM enables students to examine and question the societal forces shaping their experiences with physical activity. Through its emphasis on critical inquiry, identity exploration, social critique, media literacy, and active engagement, the model equips students to approach physical activity with a more reflective and socially conscious mindset. The CSM in PE is thus an educational approach that not only builds physical skills but also empowers students as culturally aware and critically engaged citizens.

3. PRACTICAL RESOURCES ABOUT HOW TO APPLY AND ADAPT PEDAGOGICAL MODELS

Applying cultural studies to PE is an innovative way to create a more inclusive, engaging, and socially responsive curriculum. This approach

can help educators explore themes of identity, power, diversity, and community within PE. Here are some practical resources and ideas for how to incorporate cultural studies into PE.

3.1. Books and Textbooks

Sport, Culture, and Society: An Introduction (2018) by Grant Jarvie, Jason Thornton, and Hector Mackie.

This book provides foundational insights into how culture shapes sports and physical activities. It's useful for understanding the broader social contexts that affect PE and can provide educators with ideas on how to discuss cultural differences in attitudes toward sports, body image, and competition.

Physical Education and Critical Pedagogy edited by Tania Cassidy, Kathleen Armour, and Ralph S. F. McCuaig.

This collection delves into critical pedagogy approaches within PE, aligning well with cultural studies themes. Chapters provide practical ways to challenge traditional PE methods and offer tools to address social justice, inclusivity, and diversity, making it ideal for practical adaptation.

Pedagogy of the Oppressed (1970) by Paulo Freire.

Freire's work is not specific to PE but is often cited in critical pedagogy. Applying his ideas of dialogue and critical thinking can reshape how PE teachers engage students in reflecting on issues of equity, access, and inclusion in physical activities.

3.2. Research Articles and Case Studies

Social Justice Pedagogies in School Health and Physical Education-Building Relationships, Teaching for Social Cohesion and Addressing Social Inequities by Gerdin et. al (2020).

This study focuses on implementing social justice-oriented approaches within PE, making it highly relevant for culturally responsive PE. It includes real-life classroom strategies to create an environment where

students can discuss and analyse inequalities related to physical fitness, body image, and ability.

“Can I do it in my pyjamas?” Negotiating a physical education curriculum with teenage girls by Eimear Enright and Mary O’Sullivan (2010).

This article discusses how cultural studies principles can be applied in PE. It emphasises critical thinking and reflection, allowing students to explore the role of culture in shaping body image, athletic identity, and the societal value of sports.

Gender and Physical Education by D. Penny (2002).

This type of research focuses on how issues of race and gender manifest within PE settings. This article typically offers a framework for examining how racial and gender identities are constructed and represented in sports and PE, giving educators insights into addressing biases and promoting inclusivity.

3.3. Lesson Plans and Curriculum Examples

SHAPE America’s Equity, Diversity, and Inclusion resources.

The Society of Health and Physical Educators (SHAPE America) provides a wealth of resources on how to integrate equity, diversity, and inclusion into PE. The resources cover specific activities, inclusive language practices, and adaptations for cultural sensitivity, allowing educators to bring in perspectives from cultural studies in a practical way.

The Youth Sport Trust’s Inclusion 2024 PE program.

This UK-based resource is designed to help PE teachers create more inclusive lessons that address cultural and ability-based differences. It includes resources for understanding student backgrounds, engaging students with disabilities, and celebrating cultural diversity through sports and movement.

Teaching about Social Justice in Physical Education by the Human Kinetics organisation.

This practical guide includes lesson plans and activities that explore themes of social justice, allowing students to reflect on issues such as body image, stereotyping in sports, and access to physical activity. Lesson ideas are grounded in cultural studies and emphasise reflective, inclusive practices.

3.4. Strategies for Adapting Cultural Studies in PE

Use Reflective Journals and Group Discussions.

Encourage students to keep journals where they can reflect on how sports, fitness, and body culture relate to their identity and experiences. Group discussions on topics like gender roles in sports, the impact of media on body image, and stereotypes in athletics can foster a deeper understanding of cultural studies within PE.

Incorporate Diverse Physical Activities and Sports.

Introducing sports and games from different cultures (e.g., Sepak Takraw, Capoeira, Tai Chi) can help students appreciate cultural diversity and break away from traditional Western-centric PE practices. Educators can create an inclusive curriculum that reflects global perspectives on physical activity.

Engage in Community Projects or Volunteering in Diverse Communities.

Partnering with local organisations allows students to engage with and learn from diverse community members through sports and physical activities. This real-world application of cultural studies can foster empathy, break down stereotypes, and allow students to experience the role of physical activity in different cultural contexts.

Role-Playing and Scenario-Based Learning.

Using role-play exercises, students can explore situations that bring cultural studies themes into PE, such as dealing with exclusion, understanding the impact of language and attitudes on body image, and confronting biases. Scenario-based learning can be a powerful tool to discuss and deconstruct identity and social constructs.

3.5. Assessment and Reflection

Critical Reflection Papers.

After each unit or major activity, have students write reflection papers on topics such as inclusion, equity, or cultural differences they observed or experienced. This helps reinforce cultural studies concepts and allows students to internalise the social impacts of PE and sports.

Self and Peer Assessments.

Self-assessment tools where students reflect on how they interacted with others, showed inclusivity, or overcame stereotypes can reinforce cultural studies concepts. Peer assessments also provide feedback on group dynamics, enabling students to observe cultural and social behaviours critically.

By blending these resources, educators can craft a PE program that not only addresses physical fitness but also emphasises social justice, inclusivity, and critical cultural awareness. This helps students develop as holistic individuals who understand the importance of cultural diversity, respect, and empathy in physical activity and beyond.

Community mapping is an excellent tool for integrating cultural studies into physical education. By using community mapping, students can explore their local community's resources, spaces, and demographics to understand how these factors influence access to physical activity, sports, and wellness. Here's how you can incorporate community mapping in a practical, culturally relevant.

4. REFERENCES

- Azzarito, L., & Solomon, M. A. (2006). A reconceptualization of physical education: A social justice model. *Quest*, 58(1), 78–95.
- Banks, J. A. (2009). *The Routledge International Companion to multicultural education*. Routledge.
- Crenshaw, K. (2019). *On intersectionality: Essential writings*. New Press.
- Freire, P. (1970). *Pedagogy of the oppressed*. Bloomsbury Academic.
- Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice (3rd Edition)*. Teachers College Press, Columbia University.
- Hall, S. (1997). *Representation: Cultural representations and signifying practices*. SAGE Publications.
- Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32(3), 465–491.
<https://doi.org/10.3102/00028312032003465>
- Laker, A. (2003). *Physical education: Essential issues*. SAGE Publications.
- McDonald, M. G., & Birrell, S. (1999). Reading sport critically: A methodology for interrogating power. *Sociology of Sport Journal*, 16(4), 283–300.
<https://doi.org/10.1123/ssj.16.4.283>
- Newman, J. I., Thorpe, H., & Andrews, D. L. (2020). *Sport, physical culture, and the moving body*. Rutgers University Press
- Nieto, S. (2017). Re-imagining multicultural education: New visions, new possibilities. *Multicultural Education Review*, 9(1), 1–10.
<https://doi.org/10.1080/2005615X.2016.1276671>
- Paris, D. (2012). Culturally sustaining pedagogy: A needed change in stance, terminology, and practice. *Educational Researcher*, 41(3), 93–97.
<https://doi.org/10.3102/0013189X12441244>
- Penney, D. (2002). *Gender and physical education: Contemporary issues and future directions*. Routledge.
- Wright, J. (2004). Critical inquiry and problem-solving in physical education. *Sport, Education and Society*, 9(2), 207–222.

ASSESSMENT: CASE STUDIES AND QUIZZES

1. CASE STUDY

1.1. Instructions

This case study is carried out in groups of between 3 and 5 students, being advisable to create diverse and heterogeneous groups, taking into account variables such as gender, origin, and previous training, among others.

1.2. Duration

60 minutes.

1.3. Scenario

Ms. Ryan is a PE teacher in an urban city school, and she has a diverse range of cultures in her PE class. Two-thirds of the class originates from the country, but one-third comes from 3 different countries. These students who have moved to this country feel that they are not represented in PE, as a lot of what is being taught is traditional activities from their country. Ms. Ryan decides to host a cultural dance show for the school to embrace the cultures of the other students and let them show and express how their culture can be represented in a PE class.

1.4. Challenges of this Scenario

1. Engagement: Several students lack motivation or feel excluded from the class because of the cultural differences for a long time.
2. Allocated time: It may be difficult for Ms. Ryan to balance the time given to planning and developing the practical component of the lesson.
3. Expertise: The students are the experts of their culture so it's important for Ms. Ryan to really engage them in the process.
4. Responsibility for the lesson: Students are not accustomed to taking on roles beyond being a participant in the physical activity.

1.5. Task

Pick four different cultures and outline a 4-Week unit plan in Dance using Cultural studies to address these challenges (500 words). Design a poster or flyer to be used to promote the dance show to the school community, and make sure the poster shows what the dance show is trying to represent and what cultures are involved.

1.6. Answer the Following Questions

1. How can the principles of cultural studies promote inclusion among students who may feel less included in PE?
2. Briefly, contrast traditional physical education programs with the CS approach?
3. How might the CS model challenge Ms. Ryan?
4. Can you see the CS being included in other strands of physical education, and if so, where?

2. QUIZ

This quiz consists of 10 questions with only one correct answer option (in bold).

1. What is the primary objective of the IKONS methodology in the sporting context?
 - a) To enhance the performance of elite athletes.
 - b) To foster social inclusion through visual and symbolic language.**
 - c) To replace physical exercise with purely theoretical lessons.
 - d) To train individuals with motor disabilities exclusively.
2. In the context of Physical Education (PE) in Europe, what does "inclusion" mean?
 - a) Streaming pupils based on their athletic ability.
 - b) Ensuring everyone participates on an equal footing, valuing diversity.**

- c) Creating games where no one ever loses.
 - d) Integrating only pupils with physical impairments.
3. What role do "cultural studies" play in sports pedagogy?
- a) **Analysing sport as a social, political, and cultural phenomenon.**
 - b) Studying the history of the ancient Olympic Games.
 - c) Learning foreign languages through physical exercise.
 - d) Memorising the rules of sports from different Commonwealth countries.
4. Within new pedagogical approaches, the PE teacher acts as:
- a) A judge who only imposes sanctions.
 - b) A passive spectator.
 - c) A personal trainer for the highest-achieving pupils.
 - d) **A facilitator of learning and social cohesion.**
5. What do "cultural studies" promote regarding gender in sport?
- a) Mandatory segregation by biological sex.
 - b) **Deconstructing stereotypes and promoting gender equality.**
 - c) Encouraging women to avoid contact sports.
 - d) Ignoring gender differences entirely.
6. The IKONS methodology is particularly beneficial for individuals with:
- a) **Cognitive or communication difficulties.**
 - b) Only physical disabilities.
 - c) Severe short-sightedness.
 - d) Advanced reading and writing skills.
7. What is meant by a "transdisciplinary" methodology?
- a) One that is only used in the sports hall.
 - b) **One that crosses boundaries between different fields (ethics, sociology, sport).**
 - c) One that is practised in many different countries.
 - d) One that requires the use of complex technology.

8. "New" Physical Education differs from "Traditional" PE in that:
- a) There is no running involved in the new approach.
 - b) The traditional focused on direct command, while the new focuses on guided discovery.**
 - c) The new approach only utilises iPads.
 - d) The traditional approach was more enjoyable.
9. What is "physical literacy"?
- a) The motivation, confidence, and competence to value and engage in physical activity for life.**
 - b) The ability to read books about sport.
 - c) Learning the alphabet through yoga poses.
 - d) Knowing how to spell the names of various muscles.
10. What is the ultimate goal of integrating inclusion theories into PE?
- a) For all pupils to become professional athletes.
 - b) To satisfy a bureaucratic school requirement.
 - c) To reduce the cost of school insurance premiums.
 - d) To create a fairer, more equitable, and healthier society.**

BLOCK II: SPORT EDUCATION AND TGFU

CARMEN BARQUERO RUIZ (COORD.)

University of Limerick, Ireland

carmen.barquero@ul.ie

ANTONIO CALDERÓN

University of Limerick, Ireland

LOURDES MEROÑO

Catholic University of Murcia, Spain

MARÍA T. MORALES-BELANDO

Catholic University of Murcia, Spain

ELAINE MURTAGH

University of Limerick, Ireland

1. STRUCTURE OF BLOCK II

BLOCK TITLE	<i>Block II: Sport Education and TGfU</i>
DESCRIPTION	This block delves into the theoretical foundations of the Sport Education (SE) and Teaching Games for Understanding (TGfU) models, highlighting their importance in the planning of PE. The Sport Education model is designed to cultivate a deeper understanding of sport through structured participation, where students assume various roles (e.g., players or coaches). This approach fosters teamwork, leadership, and a sense of belonging within a sporting community. By simulating a sports season, students experience the dynamics of competition and cooperation, which are essential for personal and social development. The TGfU model focuses on the tactical elements of games. It promotes understanding and decision-making in sports through modified games that reflect the essence of the sport while simplifying certain components to enhance learning. This model enables students to engage in meaningful gameplay, encouraging them to analyse and develop strategies relevant to the sport. Instead of teaching isolated skills, educators might introduce a modified version of a given game that emphasises the importance of specific tactical content, allowing students to learn through play. Throughout this block, practical information on how to implement both models are provided. Educators are guided on planning units that integrate the principles of Sport Education and TGfU, ensuring students not only acquire technical skills but also develop critical thinking and collaborative abilities. By applying these models in lesson planning, teachers can create an inclusive and dynamic learning environment that prepares students for lifelong participation in sports and physical activities.
LEARNING OUTCOMES	Learners will: Explain the key principles, objectives, and structure of the Sport Education pedagogical model, and its role in promoting student engagement and teamwork. Design and implement lesson plans or seasons based on the Sport Education, incorporating roles, team-based activities, and assessment strategies. Explain the key principles, objectives, and structure of the TGfU pedagogical model, and its role in promoting student's resourcefulness. Design and implement lesson plans or seasons based on the TGfU, understanding the importance of tactical awareness and its alignment with game rules.

LEARNING ACTIVITIES	Online seminar (mandatory) Reading (mandatory) Case study (mandatory) Quiz (mandatory) Additional readings (optional)
ASSESSMENT	Quiz 10 multiple-choice questions. Case study.
DURATION	1 ECTS.
TEACHING METHODS AND TECHNIQUES	Blended learning. Case studies. Collaborative learning spaces. Forum and discussion groups.
MATERIALS	Support resources for the student, such as handouts, articles, videos, handbooks, etc.

- PART 1 -

SPORT EDUCATION

ANTONIO CALDERÓN

University of Limerick, Ireland

LOURDES MERONÓ

Catholic University of Murcia, Spain

1. INTRODUCTION

Sport Education (SE) was developed over a five-year period, during which Daryl Siedentop and his graduate students conducted several studies (Kinchin, 2006) aimed at analysing the variables that influence a quality teaching-learning process. In many of the PE classes they observed, varied and multilateral content was delivered, organized into short teaching units. Additionally, most classes adhered to quality standards set by various associations, were well-organized, and students received a high percentage of practice time, with sessions running smoothly without major disruptions. However, the level of student engagement and enthusiasm was observed to be very low.

During the classes, most of the time was spent on learning and practicing sports skills in an isolated or decontextualized manner (isolated skills). Technical and tactical sports skills were taught in situations different from actual game play (analytical context). At the end of the teaching unit, teachers would create teams, with different members in each session, with the goal of applying all the skills learned in an analytical context to real game situations (global context).

In his studies, Daryl Siedentop also observed that many students were able to perform the skills learned in isolation with great competence; however, they were unable to transfer what they had learned to a real game context. Consequently, the final or application competitions they held were not very enriching from a learning perspective. In these competitions, high-skill students dominated the game, while low-skill students often faced multiple challenges in participating to remain unnoticed and not truly participate.

The authors observed that the students' sports practice experiences in this context were significantly disconnected from real sports, failing to generate genuine interest in sports or in their practice outside of the school setting. Moreover, from their point of view, this behaviour differed significantly from how students acted in other sports practice settings, mainly extracurricular and/or club-based, or in interschool competitions. In these other contexts, the level of enthusiasm and engagement in practice was easily noticeable, as there were usually team goals

that motivated and guided the students through the teaching-learning process (improving team performance, attending national championships, enhancing technique, etc.). Additionally, the idea of always belonging to the same team increased the level of engagement in practice for young people and fostered an authentic sports practice experience, with all the accompanying benefits (values, respect, fair play, practice, competition, etc.).

However, Siedentop noted that this type of approach to sports is not without flaws, as not all students have the same opportunities to practice and compete. Likewise, at times, the focus on winning can overshadow fair play and respect for the rules. Furthermore, the level of specific technical and tactical knowledge of game positions that are not one's own is often minimal. In most cases, students are primarily responsible for following the instructions of the coaches and/or teachers who oversee these activities.

In this regard, sports, unlike other forms of physical activity, have certain characteristics that give them a distinct meaning, which must be considered when planning the teaching-learning process. Among these, Siedentop highlights several: sports are developed and practiced over seasons. Athletes, regardless of the type of sport they practice, belong to a team or club, and as affiliated members, they are subject to the competition and practice system defined by specific regulations. Moreover, in many sports (basketball, American football, table tennis, etc.), there is a general competition phase (formal competition) that culminates in a series of final matchups to determine the champion (culminating event). Additionally, during competitions and training, there are various individuals (judges and members of the technical staff) responsible for recording all actions and/or behaviours deemed necessary (score-keeping) to ensure compliance and progression.

Sport, when developed in this way (through competition and finals), possesses a festive nature that enhances participation and fosters a favourable environment for practice (festivity). It is important to note that none of these aspects, considered characteristic of modern sports (season, affiliation, formal competition, final phase, data recording, and festivity), are very present in the way sports are taught in PE classes. As a

result, the sports experiences generated in this context are somewhat incomplete and disconnected from real sports.

The philosophy of SE was built around this context and these premises in the early 1980s to develop a teaching model for PE classes that encourages authentic sports practice experiences. These are experiences in which both boys and girls have equal opportunities to practice, become competent, knowledgeable about the sport (literate), and enthusiastic about its practice. The goal is to foster in them a positive attitude toward the practice of physical and sports activities.

2. THEORY, STRUCTURE, CORE ELEMENTS, AND BENEFITS

Based on these defining characteristics of sport, the aspects that Siedentop (1987) initially identified, and later confirmed by Siedentop et al. (2020), that generally characterize SE are:

1. Seasons: A SE season combines both practice and competition, with the goal of reaching a final phase that culminates the season. The exact length of an SE season is determined partially by the frequency and duration of PE classes. The model has been successfully applied in primary education over the course of twelve 45-minute sessions, as well as in secondary education throughout an entire trimester. In related literature, 15-20 sessions are suggested as the basic duration for a full season. However, this will depend on the content being taught and other factors (age, autonomy, objectives, etc.). It is important to note that SE seasons are typically longer than the standard teaching units in many countries (6-7 sessions), because, among other factors, there are more aspects involved in the process.
2. Affiliation: One of the key aspects that all students learn through sports practice under SE, regardless of their skill level, is that every team member is important and contributes to the team's success and improvement. Students belong to the same team (group) throughout the entire season when the model is applied. Some elementary education programs

abroad have even created teams that stay together for the entire academic year in PE classes. This prolonged affiliation allows teachers to utilize recess time, where students practice their sports skills with the primary goal of enjoyment and fun, as a complement to the scheduled curriculum. Moreover, this ongoing affiliation also enables teams to participate in various school-organized sports competitions throughout the academic year. The benefits of proper sports practice, in terms of holistic development, are closely tied to this affiliation, which fosters a sense of belonging to a team that works collectively toward common goals. Another advantage of this permanent affiliation is the opportunity to assign different roles and/or responsibilities within the team. In this way, all team members, in addition to contributing to the team's success, must also take on other duties or roles that they assign to themselves (with the teacher's guidance if needed). These roles might include coach, manager, warm-up leader, equipment manager, scorekeeper, referee, etc. Fulfilling these roles increases enthusiasm and cohesion among team members. However, this can also lead to problematic situations both within and between teams, which they will need to resolve. This problem-solving and decision-making process helps foster student maturity and autonomy.

3. **Formal Competition:** The structure of sports seasons dictates the competition schedule, alternating periods of practice (sports skills training) with periods of competition (application of learned skills). The competition format and the scheduling of events vary depending on the sport being played, and these are outlined in the specific regulations. For instance, the schedule for a gymnastics, athletics, or swimming season will have little in common with that of a roller hockey, volleyball, or rugby season. Practice periods in this context are especially important, as they are integral to the process of improvement, skill acquisition, and competition preparation. The complete experience of a season allows

students to become aware of the technical, tactical, and physical improvements they can achieve, ultimately enabling them to compete and enjoy sports more fully.

4. Final Phase: A distinctive element of all sports is the selection of individuals and/or teams that perform best throughout various competitions. In some countries, national and international interuniversity or professional championships are highly significant events (e.g., the UEFA Champions League final, the Super Bowl, the NBA finals). On a smaller scale, the final event of a SE season can and should generate a similar sense of excitement within a class or even throughout the entire school. These final events can be organized in different ways depending on the characteristics of the sport (e.g., combined events in athletics, 3x3 volleyball, or a team competition in gymnastics). One characteristic of these final events is their festive nature, and their purpose is to reward individuals and teams that have excelled in certain behaviours and results throughout the season (e.g., fair play award, consistency award, organization award, effectiveness award, etc.).
5. Score keeping: The amount of data that can be recorded is quite varied and will depend on the characteristics of the participating students (e.g., number of fouls received, shots on goal, penalties, points per game, rebounds, etc.). This information should be used to provide feedback to players and teams, helping with their development and improving their knowledge of the sport (technical, tactical, regulatory, etc.). Depending on the level of the course, data recording can also assess technical quality. This information should be used to guide the teaching and learning process for students, ensuring that the intended objectives for each educational level are met. In SE, team statisticians and publicists are responsible for keeping results and other notable aspects up to date and making them public (e.g., on school bulletin boards). The evaluation process (self-evaluation and shared evaluation) can even become part of a school's historical record, with

statistics of different teams and/or individuals accumulated over the years. This aspect can motivate students to engage more deeply in both formal practice and competitive practice. For example, records like "the school's long jump record for 4th-grade students is 4.25 meters" or "the team that scored the most points in a 3x3 basketball game were the 'Lions 1985,' with 65 points" serve as benchmarks that stimulate student participation and encourage them to strive for excellence in both practice and competition.

6. **Festivity:** The festive nature of sport can be observed worldwide, regardless of the level of practice. These events can also have significant social relevance, which enhances the level of involvement and excitement for all participants. On the day of the festivity (the culmination of the SE season), several key elements should be present: team names, representative colours, results, practice areas, and fair play awards, among others. Additionally, these elements can be publicized within the school environment so that all educational stakeholders, including parents, are informed and engaged. This celebration of sports creates a memorable and motivating experience for students, reinforcing the positive aspects of competition and teamwork.
7. **Adaptation of Practice:** All tasks organized for the development of SE need to be properly adapted to the experience and skill level of all participants. The practice must be tailored to allow for the maximum amount of practice time, with adequate levels of quality that focus on improving both the technical and tactical skills of young athletes. Following his studies, Siedentop et al. (2020) suggested that small-sided games with modified rules (e.g., ball size, net or basket height, field dimensions, etc.) can be effective in achieving these goals and in facilitating progressive intervention planning. They justified the use of small-sided games by noting significant differences in the number of repetitions when comparing different formats, such as 3v3 versus 6v6 in volleyball, or 3v3 versus 5v5 in basketball. Institutionalized

game formats (like 5v5 or 6v6) are often less appropriate for SE, as they do not provide as many opportunities for students to practice and improve. Small-sided games, by contrast, offer more frequent engagement, repetitions, and opportunities for skill development, making them a better fit for educational contexts.

8. Responsibilities (Roles): Traditionally, the teaching of sports in PE classes has focused solely on directive instruction of sports techniques, where students play a passive role in the teaching-learning process, primarily responsible for obeying the teacher's decisions. This approach often neglects other important aspects, such as attitudinal, conceptual, and autonomy development. One of the main aspects of the SE is the learning and practice of various responsibilities and roles to foster student autonomy and enhance the authenticity of the sports skills learning experience. Students participating in SE engage in every role assigned to them. They learn to officiate games, record and analyse data, publicize events and results, make decisions, and solve problems. Additionally, they have the opportunity to take on roles such as coaches or physical trainers. Overall, SE provides students with the chance to learn about sports and their practice from a broader perspective, allowing them to take a more active role in their learning process. This approach not only enriches their understanding of the sport but also promotes essential life skills such as teamwork, leadership, and responsibility.

3. PRACTICAL RESOURCES ABOUT HOW TO APPLY AND ADAPT PEDAGOGICAL MODELS

Next, we will address the implementation of SE. However, we would first like to emphasize the idea of modelling that we introduced earlier and reflect on it. In agreement with Casey et al. (2021), teachers should consider a series of questions prior to the application of an SE season, related to why and what they intend to achieve by using this pedagogical model. This includes how to ensure the model is student-centred, how

to empower students through their roles, and how to develop equitable relationships. It is not just about offering an authentic sports experience, as proposed by Siedentop (1994), but also about ensuring that the learning objectives we aim for are met.

For example, a student who has the qualities to be a leader but has always been “overshadowed” by others may have the opportunity to be a coach of one of the class teams and showcase that ability. On the other hand, relationships among team members can maintain or even deepen certain hierarchies in the classroom, or help break them, promoting more equitable relationships. In many sports, boys tend to take a more prominent role than girls in PE classes due to their higher prior technical and physical levels. However, SE can allow girls to take on a leading role, not only in organizational matters but also in purely technical and tactical aspects, by choosing sports modalities where prior knowledge is similar between boys and girls, and where factors such as contact or aggressiveness are not decisive for the development of the game.

In summary, we propose that SE should be a framework for the development of students, but not just in any way (Casey et al., 2021). Behind each of the teaching strategies implemented and all the decisions made in class, there must be a significant degree of reflection by the teacher to ensure that, as a result of practice, the student achieves objectives that allow for personal development. Furthermore, this is how the model can be adapted to the local context and to what the students truly need. The use of the model on successive occasions, with different classes, content, and processes of joint reflection with the students, will facilitate this modelling action and the desirable evolution of the model.

3.1. Elements to Consider

In addition to the components that define the model, Siedentop (1994) introduced the essential element of role development. In this way, each student always has at least two roles: on one hand, all students are players (or gymnasts, or athletes); on the other, they perform an organizational responsibility within the team (team roles), such as coach, physical trainer, assistant coach, journalist, etc. Finally, the organizational

responsibility can also be carried out externally to the team, acting as referee, scorer, or linesman (or whatever is determined) when the team acts as the “organizing team” (the team responsible for refereeing and scoring at a certain moment during the competition phase). These last roles are organizational and are used for inter-team organization activities, especially, as we said, in the competition phase (García López & Gutiérrez, 2016). It will be the teacher, along with the students, who will decide which roles to develop and what functions they should have, provided that the students’ degree of autonomy allows it. Additionally, each content area will have the possibility of creating specific roles. For example, in a dance season, instead of teams, we could talk about companies that will have a main choreographer, a secondary choreographer, a sound engineer, a costume designer, etc.

In addition to the roles of player, team member, and organization, it is highly recommended to establish substitute roles. This means that each student can be assigned a role of a classmate so that in case this classmate is absent, the substitute is familiar with those functions, which helps prevent significant issues during the session. Roles play a fundamental role in the development of the model. Moreover, from our perspective, they are the key to a successful SE season, as the development of the components of SE will depend on the correct application of the roles. Therefore, there is a key question to consider: the clear and concise exposition of the functions to be performed in each of the roles, through role sheets. It is very important to give students time to experience and learn to develop these roles so that the learning experience is more authentic. This is one of the reasons why seasons should last longer than usual, typically ranging from 12 to 20 sessions, depending on the content, the programming possibilities, and the experience and motivation of the students.

All of this can be clearly seen in competition. This process becomes an important space within the model, which involves appropriate refereeing by referees, as reflected in the scoresheets by scorers, and teams needing to be properly organized by the coach. Thus, the roles go beyond merely having an organizational function; they become a prism through which the sport is experienced. For example, consider the person playing the role of referee.

Refereeing is one of the most challenging aspects of sports. However, criticizing the referee is a common practice. After a student has an experience as a referee in an SE season, they will likely not view the referee's job in the same way again, as they will appreciate the difficulties involved, how easy it is to make mistakes due to the speed of the game, and how exposed they are to criticism from spectators and players.

Another necessary element to consider is curricular materials. The SE model involves preparing a series of materials that provide a constant guide for the processes occurring in practice (e.g., team sheets, role sheets, registration sheets, etc.). These processes can revolve around role development (e.g., the description of their rights and responsibilities) or the competition calendar, which will allow knowing in advance when and what function each team will have on each competition day. We will elaborate further on both aspects, roles and curricular materials, regarding the steps to follow in implementation.

Finally, it is also important to mention that the content selected for the season, as well as the activities or gameplay forms used for its development, should be modified and/or adapted for greater participation and inclusion of all students. For example, an adapted handball season could be organized, with matches of 4 against 4 and where there are four goals or nets to score; or an athletics season could be proposed, competing in 10-meter races on one leg, and/or long jumps with feet together. The idea is to maintain the essence of the sport or content being practiced while adapting it to the needs and interests of the students and/or the learning objectives. This is yet another decision the teacher will need to make, which may be influenced by the opinions of the students.

3.2. Basic Structure of the Teaching Unit: The Season

One of the peculiarities of the SE that distinguishes it from other pedagogical models is that the teaching units have their own, differentiated structure. This structure is defined by one of the elements that SE introduces from sports outside of PE classes, namely, the configuration by seasons. As we mentioned at the beginning, a sports season has three main phases: the preseason, the regular competition, and the final phase

of the competition. Seasonal models can vary and adapt, but fundamentally we will encounter two models. The first is the more classic approach, which we call the block season. The second model, the integrated season, is typically used when different sports modalities or different specialties within the same sport are proposed.

3.2.1. Blocked Season

The block model addresses a single sports modality and is the classic scheme for SE seasons. However, we can also find examples of this type of model applied to dance (Calderón et al., 2013).

3.2.2. Integrated Season

The integrated season is one that we use when it includes several cycles of autonomous and guided practice. It is common in sports that encompass different modalities, such as athletics and gymnastics, as it allows for the sequential learning of each modality. For example, one could first address a block of running or balance skills, followed by a block of jumping or inverted elements, and each one is developed by going through all the phases of the model.

3.3. Basic Structure of the Session

As we have pointed out since the beginning of the chapter, one of the competencies that SE develops to a greater degree and intrinsically is autonomy in learning. This is evident in the model through the gradual delegation of responsibilities from the teacher to the student, within each season and throughout the different seasons of SE. Keeping this criterion as a reference, there is a progression from more to less direct instruction by the teacher throughout these seasons. Thus, the pre-season tends to have a more directive character, and progressively, the teacher delegates more responsibility to the students until the end of the season, when the student predominantly works autonomously.

This progressive delegation of responsibility as the season progresses is manifested in the exhaustive use of different teaching strategies, such as reciprocal teaching or micro-teaching. Examples of the former include

structured collaboration spaces where students learn techniques and tactics through games, taking turns as observers and correctors of their peers. An example of micro-teaching can be found in almost all roles, but probably the most evident is the role of the coach, who directs the training sessions, taking on, to a greater or lesser extent, depending on the students' maturity, a significant part of the teaching role.

As a primary consequence of this approach of progressively delegating responsibility to students, the sessions throughout the season will not vary much in their structure (divided into initial, main, or final parts) but will especially differ in the types of tasks performed in each phase.

3.3.1. The Session in the Pre-Season Phase

The pre-season has as its main objectives for the students the development of basic learning in sports tactics and techniques, knowledge of the sport, and learning the assigned roles. To achieve these objectives, the pre-season session is characterized by a more directive role from the teacher. The session typically follows a structure with the following elements:

Initial Phase.

This may include an initial assembly and warm-up. In the initial assembly, the session's work is presented, and updates are given regarding new information to consider in the development of the session. The warm-up, which in the early sessions may be directed by the teacher so that the student understands its components and the routines involved, should be delegated to physical trainers as soon as possible so they can lead it for each team.

Main Phase.

In this phase, the learning of tactical and technical content will be addressed. Again, the teacher in the early sessions of the pre-season will carry most of the teaching load (directed practice), gradually delegating it to the coaches (autonomous practice). This main phase will also progressively introduce competition through friendly matches. These friendly matches, which can be intra-team (within the team) or inter-team (against other teams), will facilitate the progressive learning of

organizational roles, such as that of the referee or the scorekeeper. It is worth noting that these matches are the best time to introduce important elements like initial greeting rituals and evaluating fair play at the end of the match.

Final Phase or Cool Down.

Team meetings will take place in this phase, where reflections on what was worked on during the session will be carried out, allowing students to practice and learn some responsibilities of the different roles. They can discuss game rules that the referee will channel to the refereeing committee, prepare reports on the training sessions and matches by the coach, and write chronicles by the journalists.

During each of these phases of the session, meetings of committees or role groups can be developed in parallel. In this way, the teacher will gather students with the same role to teach them the specific tasks of each role and evaluate their practices.

3.3.2. The Session in the Regular Competition Phase

With the transition to the regular competition phase, we encounter two types of sessions. On one hand, competition days will be introduced, and on the other hand, training sessions. Students in this phase already work autonomously in most of their roles, although they may not yet have mastered their tasks. The initial assembly phase will typically not be necessary, and teams can begin the session warming up separately in their own space. During the main part of the competition days, the organizing teams will take care of everything necessary for the competition to run smoothly: they will prepare the playing fields, the match reports, officiate, and keep score. The teams scheduled to compete (which they will know as the competition calendar should be posted on the classroom bulletin board) must do so according to the instructions of the organizing team. In the final part of the session, the organizing team is responsible for dismantling the playing fields and other tasks, such as incorporating the score records into the standings. Meanwhile, students who have competed should analyse their matches and reflect on their conclusions in team reports and match chronicles.

The training sessions during the regular season will focus on deepening the basic learning of sports techniques and tactics and perfecting the assigned roles, but with a noticeable increase in depth and student autonomy. Thus, after a possible assembly for general organization of the session and the warm-up, tasks can be assigned as part of the main phase:

- Tactical and Technical Learning Tasks: These tasks can be proposed by the teacher as a progression in the tactical and technical learning of the students throughout the season. They can also be used to address any tactical or technical errors detected during competition. In any case, during this phase, the teacher should delegate, as much as possible, the organization and implementation of these tasks to the students themselves, led by the coaches.
- Organizational Tasks: The teacher will take this opportunity to hold meetings with the different committees or role groups to refine the development of competition days and other matters such as publishing results on competition bulletin boards (physical or virtual). Thus, the refereeing committee will fine-tune the competition rules, and the fair play committee will meet to analyse any potential issues that have arisen.

Finally, again at the end of the session, a few minutes can be dedicated to analysing the work done.

3.3.3. The Session in the Final Phase of the Season

The final phase of the season is marked by the development of the "play-offs" or final phases, culminating in the grand closing event of the season. This grand event includes the final competition and the subsequent celebration. The days of this final phase are basically organized similarly to those of a regular competitive day. However, given the organizational complexity of the final event of the season, a session or part of it can be dedicated to preparing the activities that will take place at that event: the presentation of the teams, the award ceremony, the post-event party, or any other new activities that are conducted.

Once the different session possibilities offered by SE seasons have been exposed, it is once again evident that the teacher must take advantage of all these decisions to guide practice toward the objectives set for the season.

3.4 Steps to Follow in the Implementation Process

One of the key aspects that should guide the entire process, along with its essential elements (planning, intervention, and evaluation), is to have a clear understanding of the learning objectives outlined in the curriculum—what you aim to achieve, why, and how. Knowing your students and the specific context is essential for making informed decisions during class. Taking into account the phases of the season mentioned earlier (introduction, pre-season, competition, and final event), some guidelines are provided below that can help teachers fine-tune and plan their first seasons.

It is essential to remember, as noted at the beginning of this section, that despite the existence of certain characteristics and elements that are part of the structure of the model (e.g., teamwork, roles, competition), teachers should have the freedom to adapt, adjust, and partially modify some of these elements to suit their school environment and students. The work of Puente-Maxera et al. (2018) is a clear example of this. Although one of the most distinctive elements of the SE model is that students take on one or more fixed roles throughout the entire unit, the authors suggest in this study that for a specific context in primary education, the use of rotating roles can enhance motivation in primary school students.

This does not imply that all contexts and units that use SE in primary education should implement rotating roles. Instead, it is up to the teacher, along with the feedback from the students, to determine whether this can benefit the development of the unit and the achievement of the curricular learning objectives. For more detailed information on this process, we recommend reading the latest edition of Siedentop et al. (2020), García-López and Gutiérrez (2016) or Evangelio et al. (2016).

3.4.1. Introductory Phase

The initial organization of the season is very important for its proper development. It is crucial to emphasize the explanation of rules, routines, and expectations. One of the key tasks is the selection of teams. In early experiences with the model, it is important to ensure that there are no teams with members who do not get along well, as this can complicate the teacher's job. Although it could provide an opportunity to work on other social aspects, it is advisable not to focus on this in the first experiences with the model, as it adds unnecessary challenges for the teacher. The teams should be heterogeneous in terms of skill level, gender, and cultural background. There are several ways to create teams, as highlighted by Siedentop et al. (2020).

Once the groups have been established, they will need to complete the team sheet and make all the necessary decisions. To do this, they must have a clear understanding of what each role entails. This information can be provided beforehand in the classroom or even on a webpage created for the season, allowing students to familiarize themselves with it. After that, the team will choose an identifying colour to foster a sense of affiliation. This colour can be chosen or drawn from those determined by the teacher (an important aspect to consider if using bibs, as it will depend on the available colours) or by the students (if, for example, it is decided that students will wear shirts of that colour). Once all aspects of team setup are finalized, the next step is to assign training areas. Each team will have a designated training area for the entire season. This can be done by drawing lots or assigned by the teacher.

Summary of the Introductory Phase:

- The format of the season, rules, routines, and expectations are explained.
- Clear explanation of the learning objectives for the season.
- Depending on the students' prior knowledge, further explanations or basic tasks are introduced.
- Teams are formed, and they decide on their team colour, name, and roles using the team sheet.
- Practice areas are assigned.

3.4.2. Preseason

The preseason phase, in terms of the delegation of responsibilities from the teacher to the students, can be divided into two parts: a directed practice phase and an autonomous practice phase.

1. Teacher Directed Practice Phase: In this phase, students begin working on various skills under the teacher's leadership through more direct teaching methods, like task assignment. The teacher remains the leader, directing and explaining the activities to the whole group. The tasks the teacher will oversee during this phase of directed practice include:

- Instructing the students responsible for equipment and hygiene to prepare and bring materials to the designated area.
- Leading the warm-up while allowing the physical trainers to observe its different parts.
- Holding a mini-meeting with the physical trainers to guide them on how to develop an autonomous warm-up. In more experienced or advanced classes, students may design their own warm-up. Once the warm-up is complete, the teacher will gather the teams and explain the activities for the session (e.g., "Today, we'll focus on balance activities first, followed by jumping exercises").
- Beginning the modelling of the other roles (e.g., the student coach will lead an activity, the safety officer will monitor hazardous behaviour and equipment hygiene, and the community manager will take representative photos of the practice).

The teacher's role in this phase is crucial for setting the example in behaviours and responsibilities. The goal of these sessions is for students to become familiar with their roles and work on the specific skills related to the content. Additionally, this phase provides opportunities for reflection on game rules, fair play, and the activities completed during the session.

2. Autonomous Practice Phase: In this phase, the level of student autonomy increases. For example, at the start of the session, a set of routines

is followed without the need for teacher instruction. The equipment manager gathers the necessary materials for the session (after consulting with the teacher or student coach), and the hygiene and safety officer ensures that everything is clean and safe. The physical trainer leads the warm-up, and after it is finished, the coach meets with the teacher in a mini-meeting to review the activities for the session. The learning coordinator checks the board where the session's learning objectives are posted and shares them with the team after the warm-up.

During these initial sessions, the teacher must provide feedback to all student coaches to help them improve (e.g., oral communication skills, providing feedback). Moreover, in this phase, the teacher can allow teams time to review or reinforce previously practiced tasks or even design their own activities.

Summary of the Directed Practice Phase:

- Increase students' autonomy, though teacher support is still essential in guiding the development of all roles.
- Hold mini-meetings to guide physical trainers (two minutes before warm-up), student coaches (after the warm-up), and other roles as needed, to gradually build students' confidence in their roles.
- Support the organizational roles (referees and scorekeepers). Ensure sufficient autonomous practice time so referees and scorekeepers develop the knowledge and competence necessary for the regular competition phase.
- Use technological tools, if available, to promote formative and shared assessment processes. In any case, formative and shared evaluation processes should be consistently present.

3.4.3. Formal Competition

It is essential that all teams enter this phase with an adequate level of knowledge and competence in each of the roles to support the development of an educational and formative competition. Fair play, which will

have been introduced and emphasized during the previous phases, especially the preseason, plays a crucial role in this stage. To support this, schedules and various informational aspects (e.g., game rules, schedule, format) can be posted in the classroom and/or on the school's website. If the school does not have a website, the teacher can create a simple one, as it can be a motivating tool that enhances communication and learning in many ways (e.g., sharing weekly learning objectives, activities, etc.).

3.4.4. Final Phase of the Competition

There are many possibilities for this phase. It can even be planned over multiple days, including semi-finals, friendly matches, and the final event. This phase is a time to celebrate the learning achievements, and it should involve the distribution of certificates, awards, or other symbolic items. While the teacher will act as the master of ceremonies, students can also be assigned responsibilities based on the type of final event planned and the students' ages. For instance, students could be responsible for an official presentation of the teams, preparing parades with banners they've created, or acting as reporters during the final event. This is a celebratory day, where other classes in the school, as well as parents, could be invited to attend.

3.5. Evaluation

Although some learning outcomes in different national curriculum specifications are considered as guidelines, they play a critical role in planning and evaluating learning in SE seasons. Following the principles of curriculum coherence or constructive alignment (Biggs, 1996), which suggest maintaining consistency between (1) learning standards, (2) the pedagogy used to develop those standards, and (3) the evaluation processes and tools, it is recommended to use these standards as a starting point for the design and evaluation of SE seasons. Hortigüela-Alcalá et al. (2020) work is a key reference in this regard. The authors argue that to maximize the learning experience, evaluation should be embedded within any pedagogical model. In SE seasons, there are numerous opportunities for evaluation throughout the entire season, some of which have already been mentioned during the practice phase.

3.6. Final Considerations

In this last section, we would like to summarize some aspects that are considered essential to facilitate the modelling and evolution of the seasons:

- **Start Small:** Be aware that the first season will not be the best. Using new pedagogical models should be viewed as a journey that requires careful preparation and experience. For the first season, choose a content area with which you are familiar. Begin with one class, a few teams, a few roles, and be open to learning from both successes and areas for improvement.
- **Key Planning:** The initial decisions regarding learning objectives, the number of teams, roles, sessions, competition format, and evaluation methods will be crucial for the success of the season.
- **If the Roles Go Well, the Season Will Go Well:** Students need time and appropriate experiences to learn their roles and to adapt to a new pedagogical environment. Ensure they have both, and the season will have a high likelihood of success.
- **Listen to Your Students:** The SE model aims to foster student autonomy. Therefore, you should involve them in all decisions from the previous section.
- **Reflect on the Model and Its Essential Elements:** Do not apply the model prescriptively without considering the learning objectives, the characteristics of your students, and your school context. The modelling actions and decision-making guided by the core philosophy of the model, as well as your own as an educator, will help you evolve.
- **Teaching Materials:** Print in colour and laminate all your teaching and learning resources (e.g., role sheets, competition calendar, team logos, etc.) and place them in visible areas of your practice space or gym. Use a specific area of the gym or outdoor court as a base whenever you want to communicate something to the teams, including for mini-meetings.
- **Digital Technology:** If available, use the school website or create a simple one to establish the environment for the current season. You can upload information, rankings, photos, etc.

- Transfer of Learning: Use shared reflection moments with students to clarify competency aspects that will help them live better and develop a more critical view of society as a whole.

4. REFERENCES

- Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education*, 32, 347-364. <https://doi.org/10.1007/BF00138871>
- Calderón, A., Martínez de Ojeda, D., Hastie, P. A., & Liarte, J. P (2013). El modelo de Educación Deportiva y la enseñanza de la danza. Una experiencia en bachillerato. *Tándem. Didáctica de la Educación Física*, 41, 93-98.
- Casey, A., MacPhail, A., Larsson, H., & Quennerstedt, M. (2021). Between hope and happening: Problematizing the M and the P in models-based practice. *Physical Education and Sport Pedagogy*, 26(2), 111-122. <https://doi.org/10.1080/17408989.2020.1789576>
- Evangelio, C., González-Villora, S., Serra-Olivares, J., & Pastor-Vicedo, J. C. (2016). El modelo de Educación Deportiva en España: Una revisión del estado de la cuestión y prospectiva. *Cuadernos de Psicología del Deporte*, 16(1), 307-324.
- García-López, L. M., & Gutiérrez, D. (2016). *Aprendiendo a enseñar deporte. Modelos de Enseñanza Comprensiva y Educación Deportiva*. INDE.
- Hortigüela-Alcalá, D., Pérez-Pueyo, A., & Fernández-Río, J. (2020). Evaluación formativa y modelos pedagógicos: modelo de responsabilidad personal y social y de autoconstrucción de materiales. *Revista Española de Educación Física y Deportes*, 430, 23-41. <https://doi.org/10.55166/reefd.vi430.919>
- Kinchin, G. (2006). Sport education: A view of the research. In D. Kirk, D. Macdonald, & M. O'Sullivan (Eds.) *Sport education: A view of the research* (pp. 596-609). SAGE Publications Ltd, <https://doi.org/10.4135/9781848608009.n33>
- Puente-Maxera, F., Méndez-Giménez, A., & Martínez de Ojeda, D. (2018). Modelo de Educación Deportiva y dinámica de roles. Efectos de una intervención sobre las variables motivacionales de estudiantes de primaria. *Cultura, Ciencia y Deporte*, 39(13), 281-290. <https://doi.org/10.12800/ccd.vli1.1149>
- Siedentop, D. (1987). The theory and practice of sport education. *Myths, Models and Methods in Sport Pedagogy*, 79-86.
- Siedentop, D. (1994). *Sport Education: Quality PE through positive sport experiences*. Human Kinetics Publishers.

Siedentop, D., Hastie, P., & Van der Mars, H. (2020). *Complete guide to Sport Education* (3rd ed.). Human Kinetics.
<https://books.google.ic/books?id=0nKODwAAQBAJ>

Note: The whole Block has been created and informed by an English translation of the two publications.

Calderón, A., Hastie, P. A. & Martínez de Ojeda, D. (2011). Modelo de Educación Deportiva: Metodología del nuevo milenio? *Revista Española de Educación Física y Deportes*, 395, 63-79. <https://doi.org/10.55166/reefd.v0i395.213>

García-López L. M., & Calderón, A. (2021). Modelos pedagógicos de Educación Deportiva [Sport Education pedagogical model] In A. Pérez-Pueyo, D. Hortigüela-Alcalá & J. Fernández-Río (Eds.), *Modelos pedagógicos en Educación Física: Qué, cómo, por qué y para qué* (pp. 94-121). Universidad de León.

5. ANNEXES

5.1. Annex 1. Planning Guide

0. First step, what do you want students to know and be able to do?
(Once you have this clear, you go through the following sections).

1. Big Picture Goal:

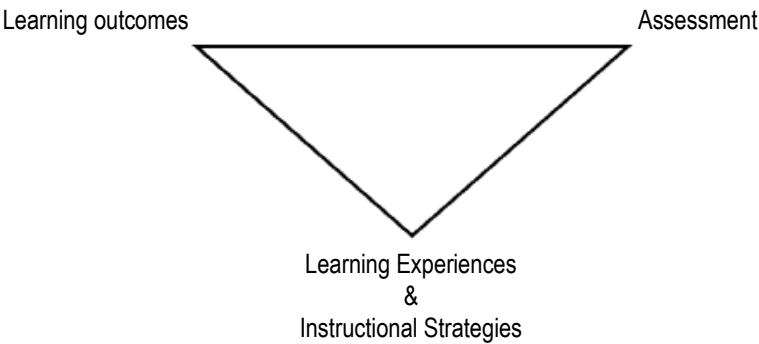
Work as a team to develop both, individual and team skills as effective team members, skilful tag rugby players (skills, tactics, strategies, rule compliance, etc), effective leaders, organisers/participants of a tag rugby event, through cooperative participation in a safe and supportive environment.

2. Big Picture Assessment:

Develop a showcase portfolio designed to display your achievement of learning that took place throughout the tag rugby season, including as an effective team members, skilful tag rugby player (skills, tactics, strategies, rule compliance, etc), effective leaders, organisers/participants of a tag rugby event, and cooperation and participation in a safe and supportive environment.

3. How do we facilitate student learning to reach goals and successfully complete assessments?

Plan for student learning to achieve learning outcomes:



Students learn about	Students should be able to	Learning Experiences	Instructional Strategies	Assessment
Roles and responsibilities.	1. Undertake different playing and non-playing roles in the selected physical activity.	Discuss with the team the roles and responsibilities. Team discussion and agreement on roles and who should undertake what. Complete initial role task card.	Explanation. Demonstration. Facilitate team discussion.	Complete diary entry (video and/or written), on their feelings about their team, on how roles were decided and their particular role.
Being an effective team member.	2. Participate as an effective member of a team working towards a common goal—for example, a culminating event, display, or performance. 3. Demonstrate effective leadership in playing and non-playing roles.	Setting team goals. Have the Captain lead the team in setting SMART goals. Designing and demonstrating role specific tasks to achieve a selected role responsibility.	Explanation of SMART goals handout based on points system-punctuality, attendance, correct uniform, team player. Active supervision.	SMART goal worksheet and measurement tool (Maintain record of team goal achievement). Design a role task card, work through the task, and provide evidence of your success (video and/or ME reflection).

DAILY SEASON PLAN

Lesson	Plan	Assessment
1	Introduce Sport Education and the objectives of the unit. Select Captains. Teacher led warm-up. Have students play a game of end ball with a rugby ball while captains pick equitable teams. Call out teams- teams pick their team's name and colour. Have a whole class discussion on roles required. Teams then have a team discussion and agreement on who does what role. Discuss SMART goals for the season and explain how these will get them team points for sports education.	Diary entry on team, selection of roles, and goals for the season.
2	Warm-up coach leads team. Video on rules. Handling and passing drills – 1 skills coach led drill (focus on correct passing and not on passing backwards). Possession game. Discuss and post points.	Quiz on rules before possession game. Peer assessment on passing. Self-reflection (photo, video, diary entry).
3	Warm-up coach leads team. Passing drill by skills coach. Possession game. Capture the flag – explained by the teacher. Tagging Drills- demonstrated by skills coach. End ball game–can still throw forwards or backwards. Discuss and post points.	Peer assessment on number of successful and unsuccessful passes.
4	Warm-up coach leads team. Focus on passing backwards drills- skills coach led. 3 v 2 passing games on home courts- defenders just shadow. 3 v 2 passing drills defenders can get the tags. 5 v 5 practice scrimmages against other teams. Each team discusses what they need to improve on. Discussion on any more role needed-publicist, photographer. Discuss and post points.	Photo/video assessment on passing backwards and defending or diary entry. Peer assessment on successful passes and overall performance.

5	Warm-up led by coach. Skills coach picks 3 drills and sets them up for their team to work on. Quiz on rules and general rugby facts. Inter team practice scrimmage + teaching of officials how to ref the game. Discuss and post points.	Spirit of the game evaluation form.
6	Warm-up coach leads team. Teacher led instruction on tactical awareness and invasion of space- practice through whole class drills. 5 v 5 scrimmage games- after game review between each game. Discuss and post points.	Photo or video what they consider good invasion and an explanation.
7	Warm up coach leads team. Skills coach has 15minutes to work on drills to improve his overall team performance. Discussion on what are good aspects of attack and defence needed in the game. Team scrimmages. Discuss and post points. Teacher led discussion on how they will run culminating team event.	Game statics performance sheet.
8	Warm –up led by coach. Culminating event. Ceremony of awards.	Diary entry either written or recorded, reflecting on the culminating event and reflecting on went well, what was learned and what needs to be improved.

- PART 2 -

TEACHING GAMES FOR UNDERSTANDING

CARMEN BARQUERO RUIZ
University of Limerick, Ireland

MARÍA T. MORALES-BELANDO
Catholic University of Murcia, Spain

1. INTRODUCTION

The Teaching Games for Understanding (TGfU) approach was introduced by Bunker and Thorpe (1982) to change how teachers taught sports in schools in England, offering an alternative to the traditional orientation. The traditional method emphasised teaching technique, leaving tactical instruction for later stages (Thorpe, 1997). PE classes were typically structured with a warm-up, followed by a demonstration by the teacher, technical instruction, and ending with a real game (Thorpe, 1997; Turner & Martinek, 1999). This teaching method resulted in many students needing to progress in their learning, developing limited knowledge of sports games, with skilled players possessing limited technique and decision-making skills. Consequently, players became dependent on the teacher (Thorpe, 1997). According to Butler et al. (2003), the TGfU model offers an alternative to overly technical sessions, encouraging the combination of technique and tactics in a game context.

Bunker and Thorpe (1982) identified several characteristics that traditional teaching methods created in children: (a) low success rates due to an emphasis on performance, (b) reduced knowledge of games, (c) some technical skills but inflexible and poor decision-making, (d) dependence on the coach/teacher, and (e) limited development of thinking as spectators or knowledge about practising sports in leisure time.

The technical model emphasizes learning motor skills in the hope that they will be automatically applied in games. Wichmann (2011) stated that through this method, students mimic the patterns presented by the teacher, as the teacher or coach usually makes decisions and controls the class (Butler, 1996; Light, 2005). If the goal of the lesson is for students to perform skills, this approach is considered the most efficient (Butler, 1996).

According to Bunker and Thorpe (1986), traditional methods focus on specific motor responses (techniques) and do not consider the natural context of games. Turner and Martinek (1995) argued that the technical model does not develop the cognitive skills necessary for game participation. Yang and Lu (2013) claimed that this model creates an inability in children to perform adequately in real game contexts, as they struggle

to apply isolated skills in the game (Cruickshank & Swabey, 2013). López and Sepúlveda (2012) stated that students' interests and motivations are not considered, leading to the abandonment of sports practice (González et al., 2008).

In response to these issues, Bunker and Thorpe (1982) proposed the TGfU model to ensure students understand what action they are performing and why before focusing on how to execute it. These authors believed that if children acquired tactical understanding, they would become more interested in sports and enjoy them more. Studies by Allison and Thorpe (1997) showed that the TGfU model improved participants' tactical knowledge and enjoyment. Additionally, implementing the TGfU model in schools resulted in improved decision-making (Turner 1996; Turner & Martinek 1999).

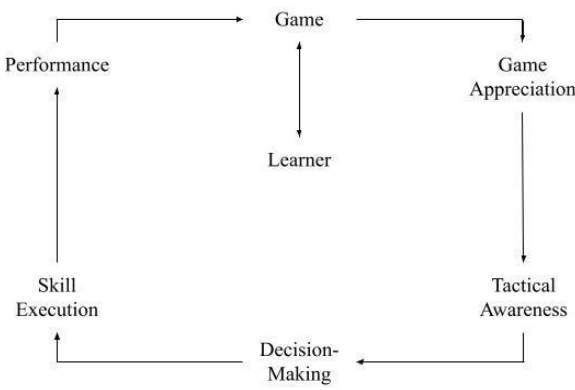
Clemente and Mendes (2011) asserted that the TGfU model can be seen as a perspective that promotes the tactical component to enhance learning. While skill execution and performance are still important, they are developed after an understanding of tactics, strategy, and game appreciation is acquired (Hastie & Curtner-Smith, 2006; Hopper et al., 2009). The central goal of the model is to emphasize knowing the game over simply doing, fostering game appreciation and understanding (Hastie & Curtner-Smith, 2006; Holt et al., 2006).

The TGfU model encourages decision-making and tactical exploration combined with technical skills, as opposed to teaching isolated skills disconnected from game comprehension, which is characteristic of traditional perspectives (Díaz-Cueto et al., 2010). This model integrates the teaching of techniques and tactics to promote skill learning and knowledge development (Holt et al., 2002; Lawton 1989; Turner & Martinek, 1995). Teaching technique allows for effective solutions to problems that arise during the game (Oslin et al., 1998; Stolz & Pill, 2013). Therefore, Díaz-Cueto et al. (2010) stressed that in this model, tactical situations, game principles, and decision-making play a significant role, offering alternatives to enhance motivation and foster positive attitudes to create lasting sports habits (López & Sepúlveda, 2012).

2. THEORY, STRUCTURE, CORE ELEMENTS AND BENEFITS

The TGfU approach is implemented through the integration of six components that help learners achieve their level of performance (Figure 2).

FIGURE 2. TGfU model presented by Bunker and Thorpe (1982).



It starts by using a modified game adapted to the age and experience of the students, with a specific objective where the necessary skills and abilities for each type of game are developed. At this stage, the principle of representation is crucial, as it is important to properly adapt the playing surface, the number of participants, and the equipment to be used.

The second step is game appreciation, for which students need to develop an interest in the game by understanding the necessary rules and how to play. Through the rules, time and space limitations are introduced in the game. Understanding the rules is of great importance in this stage of comprehension. At this stage, the principle of modification-exaggeration is taken into account.

The next stage is tactical awareness, which refers to creating a game similar to the real one where offensive and defensive aspects are developed to gain an advantage over the opponent, working on the tactics to be used in the game. This stage should be based on the principle of tactical complexity, developing an understanding of the fundamental principles

of each type of game.

Once tactical awareness has been acquired, students must begin to understand how to make appropriate decisions within the game context, knowing what to do by analysing the space and how to do it, anticipating the outcomes. Since game situations continuously change, decisions are made by recognizing the environment and predicting the outcomes of actions. In addition, decisions are made based on the situation at hand, selecting the appropriate response.

Subsequently, tactical knowledge is combined with technical execution, understanding the importance of proper technical execution for improving game performance. Technical ability is considered within the game context and the learner's understanding.

The final stage is performance, which involves applying all the previous components to achieve mastery in both modified and real games (Bunker & Thorpe, 1982, 1986; Holt et al. 2002; Mandigo et al., 2007; Metzler, 2005; Pope, 2005; Turner & Martinek, 1995).

Sports can be modified to represent the real game, maintain the internal logic and game principles, or emphasize tactical problems by exaggerating certain aspects of the game (Gréhaigne et al., 2005; Griffin et al., 2005).

After the creation of the TGfU model, four fundamental pedagogical principles were introduced for developing PE programs: demonstration, modification-representation, modification-exaggeration, and tactical complexity (Thorpe et al., 1984). The first principle refers to the selection of games, taking into account that each type of game has a distinct perspective, and some strategies from one sport can be transferred to others. Various examples of games within the same category are used so that students acquire knowledge of similar tactical solutions and problems. The second principle, modification by representation, involves maintaining the same tactical structures as in the real game but with some adaptations. In this way, a tactical or technical solution is developed within the game. The next principle is modification by exaggeration, where secondary rules are introduced to exaggerate a tactical problem. The last principle refers to the tactical complexity of the game, as each type of sport presents varying levels of difficulty, requiring an

understanding of the fundamental principles of each sports category (Holt et al., 2002; Mandigo & Anderson, 2003; Mandigo et al., 2007).

From the shared tactical problems between different sports, a classification system for sports was created. This classification was developed by Almond (1986), defining four types of sports: invasion, net and wall, bat and field, and target. Below is Table 1 with examples of each category.

TABLE 1. Classification of sports by Almond (1986).

Invasion	Net and Wall	Bat and Field	Target
Soccer	Tennis (net)	Cricket	Bowling
Hockey	Badminton (net)	Kickball	Billiards
Basketball	Volleyball (net)	Baseball	Golf
Water Polo	Squash (wall)	Softball	Archery

Within each category, different sports share tactical principles, and understanding these facilitates the transfer of performance from one sport to another (Griffin et al., 2005). According to Almond (1986), each type of sport has common characteristics. The target sports group consists of aiming a projectile at a target, and tactically, this is the simplest type of sport. Divided court sports aim to land a projectile in the opponent's playing area without them being able to return it. The next category corresponds to bat and field sports, where one team hits the projectile, trying to make the opposing team spend time retrieving it, while the hitting team moves across the field. The opponents must return the projectile as quickly as possible to prevent the other team from advancing. The last category, invasion sports, aims to reach the opponent's goal by moving a projectile, trying to score more times than the opponent.

Invasion sports aim to score points by invading the opponent's territory (Griffin et al., 1997). According to Kirk and MacPhail (2002), these sports involve an invasive playing area to attack, defending by retaining space, and having an objective to score points. The tactical principles of

this category include maintaining possession, advancing toward the goal, and scoring (Bayer, 1992).

Through Almond's (1986) classification of sports, sports with similar tactical problems are grouped, allowing knowledge from one game to transfer to another, increasing students' enjoyment and making learning more meaningful. Pearson and Webb (2008) consider enjoyment to be the most important element of TGfU, as it is inherent in the model.

To ensure that students enjoy the games, Méndez (2011) suggests several adaptations, such as adjusting the number of players, equipment, or playing space to limit the number of tactical elements to focus on. Along these lines, Arias et al. (2011) indicated that tasks should be adapted to the level and characteristics of individuals, modifying rules to create activities that motivate students, promote physical well-being, and ultimately encourage adherence to sports practice.

In TGfU, restrictions on tasks are important. These are often implemented by modifying the rules. Common modifications include those related to playing space and the number of players. According to Díaz del Cueto and Castejón (2011), modified games aim to generate a need for students to understand and use tactical components during play.

The TGfU model suggests starting with tactics, understanding, and appreciation of the game before focusing on technique (Hastie & Curtner-Smith, 2006; Holt et al., 2006; Hopper et al., 2009; Kirk & MacPhail, 2002). The technique is understood as the response that solves a problem arising from the game's dynamics; this behaviour is inherent to the context in which it occurs (Stolz & Pill, 2013).

Morales-Belando and Arias-Estero (2017) proposed the following steps for designing sessions:

1. Game Form (15 minutes): This task will focus on tactical content. It is a game similar to the real game but modified through representation or exaggeration. Tasks will be carried out in which elements of the game will be modified to encourage a defensive or offensive response, as decided. The objective will be defined based on tactical principles.

2. Teaching for Understanding (10 minutes): Between 3 and 6 questions will be designed to encourage students to reflect, aiming to foster a prior understanding of the game based on tactical learning objectives. Reflections will preferably take place in groups of 4 or 5 children.
3. Skills for Technical Development (15 minutes): The focus will be on technical execution based on the tactical knowledge acquired in the two previous tasks.
4. Return to the Game Form (15 minutes): This task should allow students to integrate the tactical and technical knowledge they have learned through the tasks and reflection questions. This task should be closer to real game, is an adaptation of the first tactical task.
5. Reflection and Conclusion (5 minutes): This task consists of 3 to 6 questions related to the tactical and technical aspects of the session. In addition to enabling students to integrate this learning, conclusions from the session will be established. The reflection and conclusion will be carried out together with all the students.

3. PRACTICAL RESOURCES ABOUT HOW TO APPLY AND ADAPT PEDAGOGICAL MODELS

3.1. Practical Application of the Teaching Games for Understanding Model

Building on the previous theory, we aim to implement the TGfU model in the practical reality of the classroom. As mentioned earlier, games within the same category share tactical principles. This will be highly beneficial when planning our sessions and teaching units, as it allows us to follow a coherent logic while using a variety of games.

By breaking down the common characteristics and tactical principles of each category, we can summarise as follows:

1. Invasion Games: These games are characterised by the

presence of attackers and defenders, sharing space, operating within a limited time, and exchanging a ball or projectiles between two teams. Given these shared characteristics, we can deduce the main tactical principles as follows:

In Attack:

- Maintain possession.
- Progression.
- Attacking the goal.

In Defence:

- Winning the ball.
- Challenging progression.
- Defending the goal.

2. Net and Wall Games: These games are characterised by not sharing space, as players throw the ball or another projectile into another area to score points. Considering this, the tactical principles, according to the literature (Mitchell, 2001), would revolve around:

In Attack:

- Positioning on the court.
- Setting up for attack.
- Winning the point.

In Defence:

- Positioning on the court.
- Defending space.
- Defending against attack.

3. Bat and Field Games: These games involve a batting team and a fielding team, aiming to place the ball in the gaps between fielders and conquer objectives (such as bases or wickets). Players hit one ball or another projectile that moves in a shared space without changing roles. These characteristics lead to two phases of play—attack and defence—with the following

tactical principles:

In Attack (Batting):

- Striking force.
- Striking placement.
- Running bases.

In Defence (Fielding):

- Delivery pitching or bowling.
- Positioning and covering ground.
- Throwing to a base or target.
- Catching and fielding the ball.

4. Target Games: The objective of these games is to throw a ball or projectile at a target. Their tactical principles focus on strategic striking in terms of force and positioning, which would be based on concentration and coordination (aiming, proximity, release, trajectory, control, placement, and velocity).

As observed, tactical complexity decreases from invasion games to target games, which are the least complex tactically due to requiring fewer decision-making processes. Moreover, within each group, the tactical principles relating to defence tend to be more complex.

3.2. Practical Implementation

So, how can I use this information practically? The first step is to determine a category of games you want to work with. For instance, if I decide on invasion games due to their higher tactical complexity, I must ensure my teaching unit includes space to work on the various tactical principles. This tactical principle will guide what I focus on each session.

For example, if I choose to work in invasion games, specifically in soccer, I need to keep in mind that the exercises I propose must respect the logic of the game; thus, the minimum characteristics of the category must be maintained. This means there must be an attacking team and a defending team that share space for a limited time and exchange a ball

or another projectile.

However, I have the freedom to modify other aspects of the game (as noted in the previous section), such as the number of attackers and defenders (exaggeration, representation), the size of the playing area, and additional rules (double points, forbidden actions, etc.).

With this in mind, let's outline the process for developing a soccer session (included in Barquero-Ruiz et al., 2021) based on the principle of "attacking the goal". We are following the guidelines set by Metzler (2005) and further developed by Morales-Belando and Arias-Estero (2017). In this sense, our session will begin with a game form, followed by teaching for understanding, then skills for technical development, followed by a return to the game form, and finally reflection and conclusion.

3.3. Session Development

Game Principle:

The principle is "attacking the goal," prompting me to ask: "Which contents relate to attacking the goal? What skills should I perform to attack the goal?"

This will help determine the tactical-technical content of the session (a single principle can encompass various technical-tactical contents, so we can and should dedicate more than one session to each tactical principle). In this case, I've decided my technical-tactical content will focus on:

- When and where to shoot on goal.
- Points of contact for the foot to ensure accuracy.

Task 1. Game Form:

Next, I need to consider: "How do I ensure that they shoot on goal during a game task? How can I encourage them to shoot at the right moment and place? Which rules could I create?"

This leads to my first task, the game form:

Rules:

- 3 vs 2.

- Double score if the attacker on-the-ball shoots from a central pitch area.
- Compulsory man-to-man defence.
- Forbidden to steal the ball from the attacker on-the-ball in the centre.

Task 2. Teaching for Understanding:

Encouraging Reflection. I then wonder: “Which questions will encourage players to think about how to attack the goal? When and from where should they shoot?” For example:

- “What is the best area of the pitch to shoot on goal? Why?”
- Expected Answer: Central areas are easier for scoring.

Task 3. Skills for Technical Development:

Skill Improvement. If shooting is vital in this session, I should consider: “How could they improve their shooting skills in my third task?” For example, a shooting game with the rule:

- All players must attempt to shoot using the inside of the foot, with the sole facing the target.

Task 4. Return to Game Form:

Next, I reflect on: “How do I encourage them to use what they have learned in the game?” And then I design my fourth task, the return to game form:

Rules:

- 3 vs 2.
- Triple score if the attacker on-the-ball shoots from a central pitch area.
- No compulsory or forbidden actions.

Task 5. Reflection and Conclusion:

Finally, I determine: “Which questions will prompt them to reflect on and embrace what they have learned?” For example: “When should you

shoot on goal? How should you kick to score? Why?”

Expected Answer: We should shoot when in a better position than teammates (central and free of opponent positions). I should kick with the inside of the foot facing the target. Other striking methods could be more powerful but are less accurate.

3.4. Developing a Session: Example and Key Questions

The development of this session serves as an example to understand the types of questions and reflections we, as teachers, must consider when creating a session based on the TGfU model. To assist in this task, we provide the following table outlining the key questions that should be asked to yourself, along with the order in which they should be addressed when designing a new session in any category of game under the TGfU model (Table 2):

TABLE 2. Key questions when designing a new session.

Step	Key Questions for myself	Purpose
Principle of play	What is the main game principle to focus on?	Identifies the core tactical theme for the session.
Tactical-technical content	What specific technical and tactical skills associated with this principle? What I want them to learn in tactical-technical terms?	Clarifies the skills needed for the players to engage effectively with the principle.
Task 1. Game Form	How can I design a game form that encourage players to explore this principle? How am I going to manipulate game to ensure the apparition of my content? (more close activity).	Helps create meaningful learning experiences that align with the principle.
Task 2. Teaching for Understanding	What questions will encourage players to think critically about the principle and the intended? Which questions are going to make them reflect and reach the right answer regarding my content?	Promotes reflective thinking and deeper understanding of the game dynamics.

Task 3. Drills for skill development	How can I facilitate skill development related to this principle during the session? Which activities may help them to practice better the necessary skills for this content?	Ensures that players have the opportunity to practise and refine their skills in context.
Task 4. Return to game form	How can I design a game form that encourage players to explore this principle? How am I going to manipulate game to ensure the apparition of my content? (more open activity).	Helps create meaningful learning experiences that align with the principle.
Task 5. Review and Closure	How will I evaluate whether the players have grasped the principle by the end of the session? Which questions are going to make them reflect and reach the right answer regarding my content?	Establishes criteria for assessing player understanding and skill application in context.

This structured approach not only aids in session design but also ensures that our teaching remains focused on fostering a deeper understanding of the game among our players as established by TGfU principles.

3.5. How to Assess Aligned with TGfU principles

The TGfU model has significantly transformed the approach to teaching sports and games by prioritising tactical understanding and decision-making over traditional skill-based methods. As educators embraced this paradigm shift, the need for evaluation strategies that aligned with these new pedagogical approaches became increasingly apparent. Consequently, various assessment tools were developed to effectively assess students' understanding and performance within this context. Among these instruments are the Performance Assessment in Team Sports (TSAP), the Game Performance Assessment Instrument (GPAI), and the Tactical Assessment Instrument (TAIS).

The TSAP (Gréhaigne et al., 1997) evaluates individual players in invasion games and concentrates on two key events: receiving and playing the ball. It is mainly designed for peer assessment, enabling participants to engage actively in their evaluation process. This fosters collaboration and self-assessment among students, aligning with contemporary

pedagogical approaches. Nevertheless, the TSAP is limited to assessing only the attacking phase, excluding defensive strategies and interactions without the ball. This narrow focus may not provide a comprehensive view of gameplay dynamics.

The GPAI (Oslin et al., 1998) is designed to observe game behaviours from a tactical perspective. It assesses seven components: base, adjustment, decision-making, technical execution, coverage, and guarding. One of its primary advantages is that it emphasises decision-making, which is crucial for performance in games, and allows for the evaluation of both offensive and defensive phases. However, it primarily focuses on individual performance and does not account for interactions between teammates and opponents, which can limit its practical application.

The TAIS (Barquero-Ruiz et al., 2022) was created to evaluate the teaching and learning of games from a tactical perspective. It collects data on performance across all roles and tactical levels within the game context. A significant advantage of TAIS is that it offers an aligned assessment, capturing multiple aspects of game performance. This allows for a deeper understanding of team dynamics and learning processes. However, being a relatively new instrument, it may not yet be as widely adopted as the other tools or seen as more complex, and further dissemination of its application may be necessary for it to reach its full potential.

4. REFERENCES

- Allison, S., & Thorpe, R. (1997). A comparison of the effectiveness of two approaches to teaching games within physical education. A skills approach versus a games for understanding approach. *The British Journal of Physical Education*, 28(3), 9-13.
- Almond, L. (1986). Asking teachers to research. In R. Thorpe, D. Bunker, & L. Almond (Eds.), *Rethinking games teaching* (pp. 35-44). University of Technology.
- Arias, J. L., Argudo, F. M., & Alonso, J. I. (2011). Review of rule modification in sport. *Journal of Sports Science and Medicine*, 10(1), 1-8.
- Barquero-Ruiz, C., Kirk, D., & Arias-Estero, J. L. (2022). Design and validation of the Tactical Assessment Instrument in football (TAIS). *Research Quarterly for Exercise and Sport*, 93(3), 615-632.
<https://doi.org/10.1080/02701367.2021.1889457>

- Barquero-Ruiz, C., Sánchez-De-San-Pedro, S., & Arias-Estero, J. L. (2021). Propuesta de tareas basadas en Teaching Games for Understanding para la mejora del aprendizaje táctico en fútbol de iniciación. *Revista Española de Educación Física y Deportes*, (433), 3–12. <https://doi.org/10.55166/reefd.vi433.984>
- Bayer, C. (1992). *La enseñanza de los juegos deportivos colectivos*. Hispano Europea.
- Bunker, D., & Thorpe, R. (1982). A model for the teaching of games in secondary schools. *Bulletin of Physical Education*, 18, 5-8.
- Bunker, D., & Thorpe, R. (1986). The curriculum model. In R. Thorpe, D. Bunker, & L. Almond (Eds.), *Rethinking games teaching*. (pp. 7-10). University of Technology.
- Butler, J. (1996) Teacher responses to teaching games for understanding. *Journal of Physical Education, Recreation and Dance*, 67(9), 17-20. <https://doi.org/10.1080/07303084.1996.10604851>
- Butler, J., Griffin, L., Lombardo, B., & Nastasi, R. (2003). *Teaching Games for Understanding in physical education and sport*. National Association for Sport and Physical Education Publications.
- Clemente, F., & Mendes, R. (2011). Aprender o jogo jogando: Uma justificação transdisciplinar. *Exedra*, (5), 27-36.
- Cruickshank, V., & Swabey, K. (2013). Yes, we can play games differently: Socialisation of PETE teachers. *Journal of Research and Reflections in Education*, 7(1), 1-7.
- Díaz del Cueto, M., & Castejón, F. J. (2011). La enseñanza comprensiva del deporte: dificultades del profesorado en el diseño de tareas y en la estrategia de pregunta-respuesta. *Tándem. Didáctica de la Educación Física*, (37), 31-41.
- Díaz-Cueto, M., Hernández, J. L., & Castejón, F. J. (2010). Teaching Games for Understanding to in-service physical education teachers: Rewards and barriers regarding the changing model of teaching sport. *Journal of Teaching in Physical Education*, (29), 378-398. <https://doi.org/10.1123/jtpe.29.4.378>
- González, S., Gil, P., & Pastor, J. C. (2008). Diseño y aplicación del modelo comprensivo de los deportes en el floorball como instrumento de formación del profesorado. *Pulso*, (31), 93-116. <https://doi.org/10.58265/pulso.4965>
- Gréhaigne, J. F., Godbout, P., & Bouthier, D. (1997). Performance assessment in team sports. *Journal of Teaching in Physical Education*, 16(4), 500-516. <https://doi.org/10.1123/jtpe.16.4.500>
- Gréhaigne, J. F., Wallian, N., & Godbout, P. (2005). Tactical-decision learning model and students' practices. *Physical Education and Sport Pedagogy*, 10(3), 255-269. <https://doi.org/10.1080/17408980500340869>

- Griffin, L., Brooker, R., & Patton, K., (2005). Working towards legitimacy: Two decades to teaching games for understanding. *Physical Education and Sport Pedagogy*, 10(3), 213-223. <https://doi.org/10.1080/17408980500340703>
- Griffin, L., Mitchell, S., & Oslin, J. (1997). *Teaching sport concepts and skills: A tactical games approach*. Human Kinetics.
- Hastie, P., & Curtner-Smith, M. (2006). Influence of a hybrid sport education-teaching games for understanding unit on one teacher and his students. *Physical Education and Sport Pedagogy*, 11(1), 1-27. <https://doi.org/10.1080/17408980500466813>
- Holt, N. L., Strean, W. B., & García-Bengoechea, E. (2002). Expanding the teaching games for understanding model: New avenues for future research and practice. *Journal of Teaching in Physical Education*, (21), 162-176. <https://doi.org/10.1123/jtpe.21.2.162>
- Holt, J. E., Ward, P., & Wallhead, T. L. (2006). The transfer of learning from play practices to game play in young adult soccer players. *Physical Education and Sport Pedagogy*, 11(2), 101-118. <https://doi.org/10.1080/17408980600708270>
- Hopper, T., Butler, J., & Storey, B. (2009). *TGFU - Simply good pedagogy: Understanding a complex challenge*. PHE Canada.
- Kirk, D., & MacPhail, A. (2002). Teaching Games for Understanding and situated learning: Rethinking the Bunker-Thorpe model. *Journal of Teaching in Physical Education*, (21), 177-192. <https://doi.org/10.1123/jtpe.21.2.177>
- Lawton, J. (1989). Comparison of two teaching methods in games. *Bulletin of Physical Education*, 25(1), 35-38.
- Light, R. (2005). Implementing understanding approaches to teaching games and sport in Asia. *Asian Journal of Exercise & Sports Science*, 2(1), 39-47.
- López, R., & Sepúlveda, I. (2012). Incidencia de los modelos de enseñanza en iniciación deportiva dentro del área de educación física. *EmásF, Revista Digital de Educación Física*, (18), 30-41.
- Mandigo, J. L., & Anderson, A. T. (2003). Using pedagogical principles in net/wall games to enhance teaching effectiveness. *Teaching Elementary Physical Education*, 14(1), 8-11.
- Mandigo, J., Butler, J., & Hopper, T. (2007). What is Teaching Games for Understanding? A Canadian perspective. *Physical & Health Education Journal*, 73(2), 14-20. <https://doi.org/10.5040/9781718208964.ch-004>
- Méndez, A. (2011). Evaluación desde la perspectiva comprensiva. *Tándem. Didáctica de la Educación Física*, (37), 42-54.

- Metzler, M. W. (2005). Tactical games: Teaching Games for Understanding. In M. W. Metzler (Ed.), *Instructional models for physical education* (pp. 401-438). Holcomb Hathway.
- Morales-Belando, M. T., & Arias-Estero, J. L. (2017). Propuesta de formación del profesorado en el enfoque Teaching Games for Understanding. *Revista Española de Educación Física y Deportes*, (419), 99-107.
<https://doi.org/10.55166/reefd.vi419.612>
- Oslin, J., Mitchell, S., & Griffin, L. (1998). The game performance assessment instrument (GPAI): Development and preliminary validation. *Journal of Teaching in Physical Education*, (17), 231-243.
<https://doi.org/10.1123/jtpe.17.2.231>
- Pearson, P. J., & Webb, P. (2008). *Developing effective questioning in Teaching Games for Understanding (TGfU)*. In 1st Asia Pacific Sport in Education Conference, Adelaide. Faculty of Education, University of Wollongong.
- Pope, C. (2005). Once more with feeling: affect and playing with the TGfU model. *Physical Education and Sport Pedagogy*, 10(3), 271-286.
<https://doi.org/10.1080/17408980500340885>
- Stolz, S., & Pill, S. (2013). TGfU-GS: *An imagined dialogue between a teacher and an academic*. Proceedings of the 28 ACHPER International Conference: Melbourne (pp. 148-157).
- Thorpe, R. (1997). La comprensión en el juego de los niños: una alternativa a la enseñanza de los juegos deportivos. In J. Devís, & C. Peiró (Eds.), *Nuevas perspectivas curriculares en educación física: La salud y los juegos modificados* (pp. 185-206). Inde.
- Thorpe, R., Bunker, D., & Almond, L. (1984). A change in the focus of teaching games. In M. Pieron, & G. Graham, (Eds.), *Sport Pedagogy: Olympic Scientific Congress proceedings*, 6 (pp.163-169). Human Kinetics.
- Turner, A. (1996). Teaching for understanding: Myth or reality. *Journal of Physical Education, Recreation & Dance*, 67(4), 46-55.
<https://doi.org/10.1080/07303084.1996.10607374>
- Turner, A., & Martinek, J. (1995). Teaching for understanding: A model for improving decision making during game. *Quest*, 47, 44-63.
- Turner, A., & Martinek, T. (1999). An investigation into Teaching Games for Understanding: Effects on skill, knowledge, and game play. *Research Quarterly for Exercise and Sport*, 70(3), 286-296.
<https://doi.org/10.1080/02701367.1999.10608047>
- Wichmann, K. (2011). The acquisition of motor skills. *Agora*, 13(1), 87-110.

Yang, C., & Lu, P. (2013). *The experimental study of Teaching Games for Understanding in college football teaching*. In International Workshop on Computer Science in sports: Atlantis Press (pp. 94-98).
<https://doi.org/10.2991/iwcss-13.2013.25>

5. ANNEXES

Planning Guide

0. First step, what do you want students to know and be able to do? (Once you have this clear, you go through the following sections).

1. Big Picture Goal:

The overarching goal is understanding that games are defined by their rules and the principles of play. Games with similar rules tend to have comparable objectives and gameplay principles. There are fundamental rules that establish the identity of a game and cannot be altered, while other rules can be modified to enhance tactical learning. Ultimately, technique is always a response to a tactical action that responds to a principle of play.

2. Big Picture Assessment:

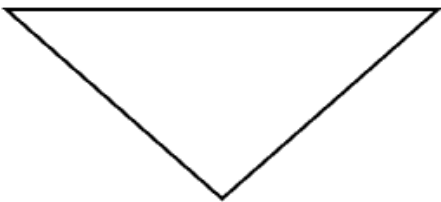
Peer-Assessment with TAIS. Through the use of assessment tools aligned with TGfU, such as TAIS, students will be able to evaluate the improvement of their tactical behaviour after the unit. They will also gain an understanding of different tactical levels and contextualised techniques through peer evaluation with their classmates.

3. How do we facilitate student learning to reach goals and successfully complete assessments?

Plan for student learning to achieve learning outcomes:

Learning outcomes

Assessment



LEARNING EXPERIENCES & INSTRUCTIONAL STRATEGIES

Students learn about	Students should be able to	Learning Experiences	Instructional Strategies	Assessment
Game appreciation.	Outline the elements that give form to the selected game including rules, boundaries and scoring.	Several games with may appear different but all share the same tactical principles.	Experiencing different games and reflecting after them about the rules and aims of all the games and how it shapes their "ID".	Common discussion.
Game appreciation.	Critique if and how the rules contribute to making a game enjoyable and challenging.	Several games with may appear different but all share the same tactical principles and using modified rules that modify the game.	Experiencing different games and modifying rules to reflect after them about the rules and aims of all the games and how it shapes their "ID".	Common discussion.
Tactics and principles of play in Invasion Games (offensive).	Set up an appropriate attacking play, either themselves or as a supporting player in different attacking scenarios.	Several sessions based on tactical principles in attack through TGfU in different invasion games.	Following the Morales-Belando and Arias-Estero (2017) 5 tasks to implement TGfU. They are going to face modified rules of games and reflections to learn how to apply the appropriate skills in different tactical situations in attack.	Observation: TAIS Instruments (peer assessment). Questioning: common reflection to check understanding.
Tactics and principles of play in Invasion Games (Defensive).	Defend space on their play area when under attack in a variety of scenario.	Several sessions based on tactical principles in defense through TGfU in different invasion games.	Following the Morales-Belando and Arias-Estero (2017) 5 tasks to implement TGfU. They are going to face modified rules of games and reflections to learn how to apply the appropriate skills in different tactical situations in defence.	Observation: TAIS Instruments (peer assessment). Questioning: common reflection to check understanding.

DAILY SEASON PLAN:

Day	Curriculum model	Activity area
Day 1	-	Games. Experiencing different invasion games and appreciating the similarities among them.
Day 2	Teaching Games for Understanding (TGfU).	Games. Invasion games - Ultimate frisbee. Attacking. Principle of play attacking the goal.
Day 3	Teaching Games for Understanding (TGfU).	Games. Invasion games - European Handball. Attacking. Attacking. Principle of play progression.
Day 4	Teaching Games for Understanding (TGfU).	Games. Invasion games - Rugby. Attacking. Principle of play progression.
Day 5	Teaching Games for Understanding (TGfU).	Games. Invasion games - Basketball. Attacking. Principle of play maintain the possession of the ball.
Day 6	Teaching Games for Understanding (TGfU).	Games. Invasion games - European Handball. Defending. Principle of play winning the ball.
Day 7	Teaching Games for Understanding (TGfU).	Games. Invasion games - Basketball. Defending. Principle of play winning the ball.
Day 8	Teaching Games for Understanding (TGfU).	Games. Invasion games - Ultimate frisbee. Defending. Principle of play challenging the progression.
Day 9	Teaching Games for Understanding (TGfU).	Games. Invasion games - Rugby. Defending. Principle of play challenging the progression.
Day 10	Teaching Games for Understanding (TGfU).	Games. Putting in practice what we have learned and learning to assess our performance through TAIS or GPAI.

Additional Resources:

- Assessment instruments:
- Instructions:



INSTRUCTION FOR ANALYST IN INVASION GAMES

- We are going to use an adapted/simplified version of TAIS (Barquero-Ruiz, Kirk, & Arias-Estero, 2021).
- We have to count the **number of times** each game action appears appropriately or inappropriately, e.g.,:

ATTACK	Appropriate	Inappropriate	Not appear	DEFENCE	Appropriate	Inappropriate	Not appear
Amplitude				Individual defence			
Moving wide and length without losing the ball				Each defender defence to one player and avoid attacker's progression			
Depth				In zone defence			
Moving vertically without losing the ball				Each defender defence one zone and avoid attacker's progression			
Pass				Defensive coverage			
Giving the ball from one to another teammate without losing the ball				One defender is placed between a teammate, the goal and the attacker on-the-ball			
Dribbling				Interception			
Progressing without losing the ball				One defender touch the ball and diverts it trajectory o recovers it			

Each time I see how the team is moving wide and length without losing the ball I put a “I” in the appropriate column. Each time I see that they are moving wide and length, but they lose the ball I put a “I” in the inappropriate column. If they are not moving wide and length in the whole match, I put a “I” in not appear.

Same structure for all the criteria it does not matter who within the team is doing the action.

*At the end of the match analysts will decide based on their results (number of appropriate actions) if any of the teams deserve two extra points and will tell their decision to scoring board

Assessment Sheet:

ATTACK	Appropriate	Inappropriate	Not appear	DEFENCE	Appropriate	Inappropriate	Not appear
Amplitude				Individual defence			
Moving wide and length without losing the ball				Each defender defence to one player and avoid attacker's progression			
Depth				In zone defence			
Moving vertically without losing the ball				Each defender defence one zone and avoid attacker's progression			
Pass				Defensive coverage			
Giving the ball from one to another teammate without losing the ball				One defender is placed between a teammate, the goal and the attacker on-the-ball			
Dribbling				Interception			
Progressing without losing the ball				One defender touch the ball and diverts it trajectory o recovers it			



INSTRUCTION FOR ANALYST IN S&F GAMES

- Offense: Player decides appropriately pitch and placement of shot.

[illegible][illegible]

VIDEO. How to assess with GPAI:Game Performance Assessment Instrument: <https://www.youtube.com/watch?v=WppG9HmM28c>

Research works with examples of sessions:

An example of an aligned floorball TGfU Session and its assessment:

Morales-Belando, M. T., Calderón, A., & Arias-Estero, J. L. (2018). Improvement in game performance and adherence after an aligned TGfU floorball unit in physical education. *Physical Education and Sport Pedagogy*, 23(6), 657–671. <https://doi.org/10.1080/17408989.2018.1530747>

An example of a european football session and its assessment:

Barquero-Ruiz, C., Morales-Belando, M. T., & Arias-Estero, J. L. (2021). A Teaching Games for Understanding program to deal with reasons for dropout in under-11 football. *Research Quarterly for Exercise and Sport*, 92(4), 618-629. <https://doi.org/10.1080/02701367.2020.1759767>

An example of sailing session within TGfU:

Morales-Belando, M. T., & Arias-Estero, J. L. (2017). Effect of Teaching Races for Understanding in Youth Sailing on Performance, Knowledge, and Adherence. *Research Quarterly for Exercise and Sport*, 88(4), 513–523. <https://doi.org/10.1080/02701367.2017.1376032>

Webpage with useful information: TGfU.Info - TGfU Special Interest GRoup
<https://www.tgfu.info/>

ASSESSMENT: CASE STUDIES AND QUIZZES

1. CASE STUDY

1.1. Instructions

This case study is carried out in groups of between 3 and 5 students, being advisable to create diverse and heterogeneous groups, taking into account variables such as gender, origin, and previous training, among others.

1.2. Duration

60 minutes.

1.3. Scenario

Ms. Conti, a PE teacher at Scuola Media di Roma, has noticed that her 9th-grade students show varying levels of engagement and skill in PE class. One student, Giulia, often stays on the side lines, feeling hesitant about participating due to a lack of confidence in her skills. Other students are more engaged, but they focus heavily on scoring points rather than understanding the strategy behind the game. This results in some students, like Giulia, rarely having the opportunity to engage meaningfully. Ms. Conti's goal is to create an inclusive environment that fosters teamwork, understanding of game tactics, and individual skill improvement, while making PE enjoyable and educational for all.

1.4. Challenges of this Scenario

1. Engagement: Several students lack motivation or feel excluded during team sports.
2. Skill disparity: Some students have advanced skills, while others need to work on basic techniques.
3. Understanding the game: Most students focus on scoring rather than applying strategic principles.
4. Teamwork and roles: Students are not accustomed to taking on roles beyond player positions, limiting their understanding of the broader functions within a team.

1.5. Task

Outline a 4-Week unit plan using Sport Education and TGfU to address these challenges (500 words).

Develop a comprehensive unit plan that outlines how you will implement the Teaching Games for Understanding (TGfU) and Sport Education models to effectively tackle the challenges faced by students in your physical education class.

1.6. Answer the Following Questions

1. How can the principles of Sport Education promote teamwork and collaboration among students like Giulia, who may feel less confident in their skills?
2. In what ways does the TGfU model facilitate understanding of game strategies, and how could this understanding help students focus on both individual and team performance?
3. What specific tactics can Ms. Conti employ from the TGfU approach to help students better grasp the tactical elements of the games they play?
4. How might the structure of Sport Education encourage students to take on different roles within their teams, potentially increasing Giulia's sense of belonging and participation?
5. Considering the importance of reflection in both models, how can Ms. Conti implement reflective practices that allow students to articulate their learning experiences and challenges faced during the unit?

2. QUIZ

This quiz consists of 10 questions with only one correct answer option (in bold).

1. What is one of the primary goals of the Sport Education model?
 - a) Maximizing individual performance in competitive sports.

- b) **Promoting student engagement and teamwork.**
 - c) Teaching complex motor skills at an advanced level.
 - d) Focusing solely on improving fitness levels.
2. Which of the following is NOT a key characteristic of the Sport Education model?
- a) Students take on roles such as referees, coaches, and team captains.
 - b) A season-long format is used to simulate authentic sport experiences.
 - c) **The teacher controls all decision-making and activities.**
 - d) The model emphasizes teamwork and collaboration.
3. In the Sport Education model, what does the term "seasons" refer to?
- a) A period focused on physical conditioning.
 - b) A series of unconnected lessons on various sports.
 - c) **A structured unit of instruction simulating a sports season with a pre-season, formal competition and culminating event.**
 - d) A sequence of fitness tests used to assess students.
4. Which of the following roles would students typically assume in a Sport Education lesson?
- a) Coach.
 - b) Referee.
 - c) Fitness trainer.
 - d) **All of them.**

5. When designing a lesson plan based on Sport Education, what element should be emphasized to promote student autonomy?
- a) Teacher-directed drills and conditioning.
 - b) Opportunities for students to assume various roles.**
 - c) Assigning homework on sports theory.
 - d) Direct assessment of individual motor skills.
6. According to Morales-Belando and Arias-Estero (2017), which step in the session design focuses on encouraging students to reflect on tactical learning objectives through group questions?
- a) Game form.
 - b) Teaching for Understanding.**
 - c) Skills for technical development.
 - d) Return to game form.
7. In Net and Wall Games, which of the following tactical principles is focused only on defence?
- a) Winning the point.
 - b) Setting up for attack.
 - c) Defending space.**
 - d) Positioning on the court.
8. According to Bunker and Thorpe (1982), which of the following is a characteristic of traditional teaching methods in children?
- a) High success rates due to flexibility in decision-making.

- b) Independent problem-solving and self-guidance during games.
 - c) **Limited knowledge of games and dependence on the coach/teacher.**
 - d) Strong understanding of sports for leisure and spectator roles.
9. In the TGfU model, which principle involves adapting the game by adding secondary rules to highlight a specific tactical problem?
- a) Demonstration.
 - b) Modification by representation.
 - c) **Modification by exaggeration.**
 - d) Tactical complexity.
10. According to Almond's (1986) classification of sports, why is it useful to group sports into categories such as invasion, net and wall, bat and field, and target?
- a) It highlights that all sports require the same tactics and skills.
 - b) **It shows how different sports share similar tactical principles, allowing skills and strategies to transfer across sports in the same category.**
 - c) It focuses on teaching each sport separately to avoid confusion.
 - d) It prevents students from comparing different types of sports.

BLOCK III: COOPERATIVE LEARNING, ADVENTURE EDUCATION, ATTITUDINAL STYLE AND SELF- CONSTRUCTION OF MATERIALS

LOURDES MEROÑO (COORD.)

Catholic University of Murcia, Spain

lmerono@ucam.edu

ENCARNACIÓN RUIZ LARA

Catholic University of Murcia, Spain

MARÍA T. MORALES-BELANDO

Catholic University of Murcia, Spain

FRANCISCO SEGADO SEGADO

Catholic University of Murcia, Spain

AARÓN MANZANARES SERRANO

Catholic University of Murcia, Spain

FRANCISCO JOSÉ CÁNOVAS ÁLVAREZ

Catholic University of Murcia, Spain

1. STRUCTURE OF BLOCK III

BLOCK TITLE	<i>Block III: Cooperative Learning, Adventure Education, Attitudinal Style and Self-Construction of Materials.</i>
DESCRIPTION	In this block we delve into the theoretical foundations of the Cooperative Learning, Adventure Education, Attitudinal Style, Self-Construction of Materials models, highlighting their importance in the planning of PE. Cooperative Learning is a pedagogical model where students work together in small groups to achieve shared learning goals. It promotes active engagement, critical thinking, and social interaction, allowing students to learn from one another's strengths and perspectives. Key principles include positive Interdependence, individual responsibility, face-to-face interaction, group processing, and interpersonal skills. equal participation and equal opportunities for success. Through structured activities like group discussions, problem-solving tasks, and collaborative projects, cooperative learning enhances both academic achievement and social skills. Research shows it fosters higher motivation, improved retention, and better interpersonal relationships. Adventure Education involves experiential learning through outdoor activities and challenges, promoting personal growth, teamwork, and problem-solving skills. By engaging in physically and mentally demanding tasks, participants build resilience, self-confidence, and leadership abilities. This approach fosters collaborative learning, helping individuals develop life skills in dynamic, real-world settings. Attitudinal Style emerges with the aim of working towards the holistic development of students, now with a competency-based approach, seeking to foster their motivation and enjoyment of PE classes by building on their prior experiences and needs. It emphasises providing positive, inclusive experiences that encourage the development of habits for engaging in autonomous physical activity, both within the classroom and during their free time. To achieve the intended purpose of this pedagogical model, three key elements are used: Intentional body activities, sequential organization toward attitudes, and final assemblies. Self-construction of Materials involves learners creating their own educational resources, such as study guides, visual aids, or learning tools. This process encourages active engagement, critical thinking, and deeper understanding. By personalizing materials, students enhance their learning experience, foster creativity, and develop skills in problem-solving and independent learning. Throughout this block, practical information on how to implement both models are provided. Educators are guided on planning units that integrate the principles of Cooperative Learning, Adventure Education, Attitudinal Style, Self-Construction of Materials models, ensuring students not only acquire technical skills but also develop critical thinking and collaborative abilities. By applying these models in lesson planning, teachers can create an inclusive and dynamic learning environment that prepares students for lifelong participation in sports and physical activities.

LEARNING OUTCOMES	Learners will: Explain the key principles, objectives, and structure of the Cooperative Learning, Adventure Education, Attitudinal Style, and Self-Construction of Materials pedagogical models, and its role in promoting student engagement and teamwork. Design and implement lesson plans or sessions based on the Cooperative Learning, Adventure Education, Attitudinal Style, and Self-Construction of Materials models, incorporating elements, team-based activities, and assessment strategies. Explain the key principles, objectives, and structure of the Cooperative Learning, Adventure Education, Attitudinal Style, and Self-Construction of Materials models pedagogical models, and its role in promoting student's resourcefulness.
LEARNING ACTIVITIES	Online seminar (mandatory) Reading (mandatory) Case study (mandatory) Quiz (mandatory) Additional readings (optional)
ASSESSMENT	Quiz 10 multiple-choice questions. Case study.
DURATION	1 ECTS.
TEACHING METHODS AND TECHNIQUES	Blended learning. Case studies. Collaborative learning spaces. Forum and discussion groups.
MATERIALS	Support resources for the student, such as handouts, articles, videos, handbooks, etc.

- PART 1 -

COOPERATIVE LEARNING

ENCARNACIÓN RUIZ LARA

Catholic University of Murcia, Spain

MARÍA T. MORALES-BELANDO

Catholic University of Murcia, Spain

LOURDES MEROÑO

Catholic University of Murcia, Spain

1. INTRODUCTION

The fundamental objective of the Cooperative Learning (CL) pedagogical model is to help form students - citizens who can improve the society in which we live, making it more humane and cooperative, and from PE this is carried out with an element that defines it, motor skills, "co-operativising" this subject, to the detriment of "hyper-competitiveness", so that all students, not just the most able, can enjoy, learn and grow as people (Pérez-Pueyo et al., 2021).

2. THEORY, STRUCTURE, CORE ELEMENTS, AND BENEFITS

2.1. Conceptualization

Johnson et al. (2013) define CL as "the use of small groups for students to work together to maximise their learning and that of others" (Pérez-Pueyo et al., 2021, p.28).

Fernández-Río (2014) defines CL as "a pedagogical model in which students learn with, from, and by other students through a teaching-learning approach that facilitates and enhances this positive interaction and interdependence and in which teacher and students act as co-learners" (p. 6).

To summarise, there are four theoretical perspectives (Slavin, 2014), which underlie the success of CL:

1. Motivational: Motivation towards the task is very important in the learning process, and cooperative learning structures help in this respect, thanks to collective success.
2. Social cohesion: Group work with adequate social cohesion, with positive social relationships, promotes learning.
3. Cognitive: Mental processes for information processing are 'richer' in a group with positive interactions between all members, as everyone is 'in the same boat', 'going in the same direction'.
4. Development: The interaction between group members facilitates the learner in the 'zone of proximal development' (Vygotsky, 1979) to develop fully.

2.2. Basic Elements

There are five essential elements (Johnson & Johnson, 2009):

1. Positive interdependence: Is summarised in the phrases: ‘I need you, and you need me to achieve our common goal’ (this does not mean that, in addition, each can achieve different goals) and ‘everyone wins, and no one loses’ (there is no one who is a ‘loser’).
2. Individual responsibility: Is summed up in the phrase: ‘everyone must contribute’; each member of a working group must take responsibility for a part of the task at hand (even if it is very small).
3. Promoting interaction: This is summarised in the phrase: ‘we help each other’; during the activity, ‘direct mutual support’ is essential for the successful completion of the task; if there is no support, there is no cooperation.
4. Group processing: This is summarised in the phrase: ‘evaluate what we do’; on the one hand, it is essential that the group evaluates its performance to improve it, and, on the other hand, the information needed to solve the task must be processed so that all members ‘integrate’ it and can use it in their learning.
5. Interpersonal skills: Summarised in the phrase: ‘learning and practising good manners’; students should learn positive relationship skills such as taking turns, sharing materials and spaces, listening, resolving conflicts in a dialogical way, encouraging, rejoicing in the success of others, criticising ideas and not people, defending one's own point of view without hurting anyone (Pérez-Pueyo et al., 2021, p. 28).

Fernández-Río (2018), Kagan (2003) and Pujolás (2008) also consider two other elements to be fundamental, to avoid and/or mitigate a possible malfunctioning of the groups and to ensure that they are truly cooperative, in a context of co-regulation, as Salonen et al. (2005) point out:

1. Equal participation: This is summarised in the phrase: ‘everyone has the right to participate in equal measure’; active participation in tasks is an essential element to make progress in learning, so the teacher, and the group itself, must ensure that all members can participate in similar percentages (to be agreed within the group); as noted above, proper co-regulation of working groups is essential (Salonen et al., 2005); no one is dispensable in the group.
2. Equal opportunities for success: This is summed up in the phrase: ‘to learn you have to be successful in what you do’; that is why the activities proposed by the teacher must be eminently open, in which there are many possible solutions (and not a single way of doing them) so that everyone, depending on their characteristics, can perform some successfully and help in collective achievements; it is about re-defining success to make it self-referenced and learning-oriented (Fernández-Río, 2017a), since no one is dispensable and everyone has the right to learn (Pérez-Pueyo et al., 2021, p. 29).

It is important not to confuse terms such as collaboration vs. cooperation, because in the latter there is a shared objective and nobody loses. In turn, group work vs. cooperative work: in the latter, the leadership of the group is rotating, there is help among all members of the group, social skills are worked on, there is positive interdependence.

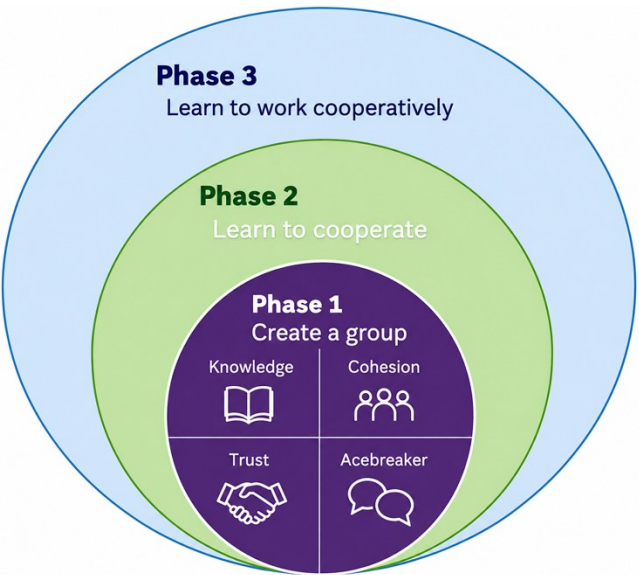
3. PRACTICAL RESOURCES ABOUT HOW TO APPLY AND ADAPT PEDAGOGICAL MODELS

The transition towards a more cooperative PE should be progressive, not used sporadically, but rather the attitude of the teaching staff, their role (which should be very active), their vocabulary, their programming, etc., should be changed; so that the pupils' vision of the approach and dynamics of the subject can also change (moving away from individualistic and competitive approaches, always giving great importance to social relations and values, as much as to the motor aspect), and although it is recommended that this transformation should begin at the start of

a new course or after a break during the holidays, it is advisable to follow certain steps afterwards, so that the CA is here to stay.

The Cooperative Learning Cycle (Fernández-Río, 2017b) represents a step-by-step guide to implement this pedagogical model in PE (Figure 3). It includes 3 phases, which ‘follow’ each other, but without being unidirectional or hierarchical (for example, you can start with phase 2, if you think it is convenient, or go back from phase 3 to phase 1 directly; however, it is essential to ‘respect the order’ when trying to implement it for the first time in a group.

FIGURE 3. Cooperative Learning Cycle.



3.1. Phase 1. Group Building and Cohesion

The first objective will be to achieve a cooperative classroom climate, for which class-group cohesion is essential, as pointed out by Kagan (2003) and Pujolás (2008). To this end, emphasis will be placed on grouping, which at this stage must be totally flexible. Furthermore, they will range from working in large groups (in simple activities to solve) to small groups or in pairs, which are quickly formed and broken up in each activity. These groups will sometimes be formed autonomously by

the students, sometimes by the teacher directly, or even randomly, by chance, using a mobile application.

The aim is to ensure that at the end of each session, all the students have worked directly with a large number of different classmates, so that they can work with all of them in two or three sessions.

This phase 1 is divided into four sub-phases:

1. Introduction: Aims to help pupils get to know the names of all the classmates in the class group as soon as possible, especially those who are new, or to remember them after a holiday break. However, it can be extended to get to know their tastes and interests, and to work on specific PE content.
2. Icebreaker: This is a step forward from the first one, seeking to get pupils to break the ice between them and lose the embarrassment of working together; through fun activities with direct contact, even physical contact (breaking invisible barriers and touching and being touched respectfully). Example: tangle of colours activity.
3. Trust: The aim is to go a step further, to develop ‘trust between all members of the class-group’, enabling them to work with each other, trusting each other, and showing that they can trust us. Recommended activities should involve some risk (objective and subjective), which can be overcome with the support of peers, demonstrating that no harm will come to them. Trust requires time (several demonstrations) and seriousness (no jokes).
4. Self-awareness: Emphasises trust between peers, helping the learner to get to know him/herself better with the help of others: to grow individually with the collaboration of the rest of the group, to increase their bonding; through blindfolded activities (of some members or even the whole group). For example, blindfolded guide activity around the classroom in safety.

3.2. Phase 2. Cooperative Learning as Content for Teaching and Learning

In this phase, the aim is to help students to discover that in PE they can cooperate to learn and help other classmates to learn. In this sense, the working groups, as in phase 1, it is recommended that they continue to be flexible, although in certain tasks and in some sessions, the groups of 2 or 4 people created can remain stable. Another recommendation is the heterogeneity of these groups by sex, body morphology, level of ability, friendship, etc. Therefore, their formation should not be done randomly, by chance, nor by the students themselves, but by the teacher, for which the use of sociograms can even be useful, which will allow the exploration of the relationships between classmates (González, 2017).

It is recommended that teachers use simple techniques in PE, such as the following:

- a. Collective Score (Orlick, 2002): Very simple and appropriate for CL initiation. The aim is to achieve a full class-group score. The first time, it is about contributing, cooperating, and promoting individual responsibility; at the end of the activity, ideas are shared (group processing, interpersonal skills), thanks to which the individual and group result can be improved later on. For example, achieving a number of passes in pairs without dropping the ball on the floor, among the whole class.
- b. Coop Play (Grineski, 1996; based on Kagan, 1992): The proposed activity is simple, without requiring a great deal of reflection or debate to solve it, only cooperation. For example, we go from one end of the track to the other without touching the ground.
- c. Challenge-Challenge-Trade (Dyson & Casey, 2016; based on Quiz-Quiz-Trade, Kagan, 1992): For example, the teacher gives each student a card with a challenge-task, to be carried out in pairs, at the signal they quickly look for a partner to carry out the task, and when they have finished, they exchange cards, and each one carries out the task on the card they have received, helping each other; so on and so forth.

- d. Pairs-Check-Perform (Grineski, 1996; based on Pairs-Check, Kagan, 1992): In groups of four pupils, they help each other to learn, first within each group two pairs are formed, whose members help each other (while one performs, the other helps, observes and evaluates; and then the roles are changed); when the two members of the pair manage to perform the task well, they join the other pair and together they check that they are all able to perform it well; for example, with skipping rope, first with jumping on the spot, then moving on to jumping with displacement, and so on.
- e. PACER (Performer and Coach Earn Rewards; Barrett, 2005): The teacher explains a skill and gives a card with a list of tasks to do for each group, and points out the minimum to do correctly at the end of a certain time; in each group they help each other to do the tasks all correctly, which will be checked by the teacher at the end of the time; awarding points and even prizes when a sufficient number of them are reached. In this context, within the group there is self- and co-evaluation, to check how the learning process is going and to collaborate so that everyone achieves it.

3.3 Phase 3. Cooperative Learning as a Resource for Teaching and Learning

Once the students have experienced the first two phases of the cycle, they will already have experience in cooperative work and stable or base groups can be formed (Pujolás, 2008), for several sessions and even an entire learning situation or didactic unit; the ideal number of students for them to function correctly is four, with the same characteristics as indicated above in terms of the teacher's elaboration and heterogeneity.

It is recommended that teachers use complex techniques in PE at this stage, such as the following:

- a. Think-Share-Perform (Grineski, 1996; based on Think-Pair-Share; Kagan, 1992): Groups are presented with a problem to solve in the form of a challenge; they discuss

the proposed solutions and try to put some of them into practice: for example, cooperative physical challenges (Fernández-Río, 1999a, b; Fernández-Río & Velázquez, 2005). Two aspects to bear in mind: the teacher should be an activator, promoting cooperative actions and correcting those that can be improved, and the role of leader on the part of the students, if it exists within the framework of the activity, should be a rotating one.

- b. Numbered Heads together (Casey & Quennerstedt, 2020): The members of a group number off; the teacher sets a task, which each student tries to solve individually; after a couple of minutes, all members of the group join together to share the solutions and help each other to do it correctly; after another four-five minutes, the teacher calls out a number and that student has to complete the task.
- c. Learning teams (Fernández-Río, 2006; based on Learning Teams; Grineski, 1996; Learning Together; Johnson & Johnson, 1975): In the working groups, two rotating roles are established; one as executor (who carries out the task proposed by the teacher) and the other as teacher/referee/scorer, who observes, evaluates, corrects, etc.
- d. Jigsaw (Aronson, 1978): Within the working group, each is responsible for learning a part and being the expert; the experts from each group join together to achieve the whole learning and return to their home groups to teach the rest of their peers.
- e. Invention of Games/Tasks (Fernández-Río, 1999a, b; Fernández-Río & Morales, 2020; based on Kirchner, 2005): The teacher asks each group of pupils, already experienced in cooperation, to design a game/task following some premises: number of players, space, material, rules and skills; they try out the different proposals and when they have the final one they share it with the rest of the groups, so that they can practice it. Self-built materials

enhance the creativity of the pupils and help them in their design and cooperation process (Fernández-Río & Méndez-Giménez, 2014; Méndez, 2011).

With regard to evaluation, in CL, as has already been indicated when mentioning the essential elements of it, it is essential to evaluate what we do: both from the point of view of decision-making to resolve the motor situations posed, and of the actions or skills implemented, and also of the functioning of the group, in order to learn from it and improve.

For the latter, to evaluate the cooperative work of the members of a group, through self-evaluation procedures, within the framework of formative assessment, it could be appropriate to use a rubric such as the one presented below (Table 3); which can be completed individually ('I have achieved...' / 'It has cost me...') or in a group by consensus (intra-group) ('We have achieved...' / 'It has cost us...').

TABLE 3. Rubric for individual or intra-group self-assessment of the key elements of Co-operative Learning.

	Excellent	Well	Acceptable	Much to be improved
Positive interdependence	I have managed to learn/achieve the proposals thanks to my colleagues and I have helped/encouraged them to do so.	I have managed to learn/achieve the proposals thanks to my colleagues, although I have not helped/encouraged them as much as I should have from me.	I have found it very difficult to learn/manage to carry out the proposals thanks to my colleagues due to my lack of attention and/or I don't know if I have been able to get them to carry them out on my behalf.	I have not succeeded in learning/achieving to realise the proposals thanks to my colleagues and/or I don't think they got it from me.
Promoting interaction	I have supported, helped and encouraged my colleagues to improve.	Although, in general, I have supported, helped and encouraged my colleagues to improve, there have been some exceptions.	I have only supported, helped and encouraged my friends to improve themselves.	I have not supported, helped or encouraged anyone.

Individual responsibility ¹	I have done my job perfectly and I have ensured that my part of the work has contributed directly to the objectives of the group.	I have done my work well, but I have not paid particular attention to ensuring that my part of the work has contributed to the group's objectives. that my part of the work has contributed to the objectives of the group.	I have not done all my work, and furthermore I have not paid the attention I should have paid to making sure that my share of the work contributed to the group's objectives.	I have failed to fulfil my responsibility in the tasks entrusted to me.
Interpersonal skills	I have developed my relational skills (empathy, encouragement, patience, ...) for the good atmosphere of the group.	In some cases, I could have been more empathetic, sympathetic, encouraging or patient with my colleagues to contribute to the good atmosphere of the group. My colleagues contribute to the good atmosphere of the group, although in general I have done so.	I could have been more empathetic, sympathetic, encouraging or patient with my colleagues in order to contribute to the good atmosphere of the group. I have only been so with my close friends.	I have not been at all empathetic, sympathetic, kind or patient with my colleagues and friends.
Self-assessment / group processing * Self-assessment / group ²	I have actively participated (spoken) in the group self-evaluation process, analysing what has happened in order to continue to improve.	I have participated (spoken) in the group self-evaluation process on time, analysing what has happened in order to continue improving.	Although I have not participated (speaking) in the group self-evaluation process, I have been concerned to analyse what has happened in order to continue to improve.	I have neither participated nor bothered to analyse what needs to be improved.

1 If this rubric is used in a teaching unit on cooperative games, with a playful nature but without implementing the cooperative learning pedagogical model, both individual responsibility and group processing/self-assessment can be eliminated as aspects to be assessed.

2 If this rubric is used in a teaching unit on cooperative games, with a playful nature but without implementing the cooperative learning pedagogical model, both individual responsibility and group processing/self-assessment can be eliminated as aspects to be assessed.

Equal opportunities to learn and success	I have allowed/encouraged that we all have the necessary opportunities to perform and/or learn and to succeed.	At some point in time, it might have been more conducive that everyone, without distinction, having the necessary opportunities to perform and/or to learn and succeed.	I have only allowed/encouraged my closest friends to have the necessary opportunities to perform and/or learn and succeed; with the rest I have not helped at all.	I have prevented my peers from having the opportunities necessary to perform and/or learn and succeed.
Equal sharing of tasks	I have made sure that all of us (without exception) have participated according to our possibilities.	In general, I have made sure that everyone has participated according to their possibilities, although there have been some exceptions that I have not worried about.	I have been concerned that only my group of friends have participated according to our possibilities. I failed to empathise and accept the limitations and possibilities of achievement of some of my colleagues.	I have been aware that not all of us have participated to the best of our ability, and I have done nothing to remedy this.

Source: Pérez-Pueyo et al. (2020), pp. 54-55.

4. REFERENCES

- Aronson, E. (1978). *The Jigsaw Classroom*. Sage.
- Barrett, T. (2005). Effects of cooperative learning on the performance of sixth-grade physical education students. *Journal of Teaching in Physical Education*, 24(1), 88–102. <https://doi.org/10.1123/jtpe.24.1.88>
- Casey, A., & Quennerstedt, M. (2020). Cooperative learning in physical education encountering Dewey's educational theory. *European Physical Education Review*, 26(4), 1023-1037. <https://doi.org/10.1177/1356336X20904075>
- Dyson, B., & Casey, A. (2016). *Cooperative Learning in Physical Education and Physical Activity: A Practical Introduction*. Routledge.
- Fernández-Río, J. (1999a). Cooperar para adquirir las bases de una buena condición física. In COLEF (Coord.), *Unidades Didácticas 1. Educación Física en Secundaria y Bachillerato* (pp. 52-62). Ágonos.
- Fernández-Río, J. (1999b). La cooperación y las habilidades motrices básicas. In COLEF (Coord.), *Unidades Didácticas 1. Educación Física en Secundaria y Bachillerato* (pp. 64-75). Ágonos.

- Fernández-Río, J. (2006). *Estructuras de trabajo cooperativas, aprendizaje a través de claves y pensamiento crítico en la enseñanza de los deportes en el ámbito educativo*. In V Congreso Internacional de Actividades Físicas Cooperativas. Oleiros, Coruña.
- Fernández-Río, J. (2014). *Aportaciones del modelo de responsabilidad personal y social al aprendizaje cooperativo*. In IX Congreso Internacional de Actividades Físicas Cooperativas, Vélez-Málaga.
- Fernández-Río, J. (2017a). Redefining students' success (learning-oriented, self referenced) in today's physical education. *Journal of Physical Education, Recreation & Dance*, 88(3), 3-4.
<https://doi.org/10.1080/07303084.2016.1271251>
- Fernández-Río, J. (2017b). El ciclo del aprendizaje cooperativo: una guía para implementar de manera efectiva el aprendizaje cooperativo en educación física. *Retos. Nuevas Tendencias en Educación Física, Deportes y Recreación*, 32, 264-269. <https://doi.org/10.47197/retos.v0i32.51298>
- Fernández-Río, J. (2018). *Participación equitativa e igualdad de oportunidades de éxito: sexto y séptimo elementos básicos del aprendizaje cooperativo*. In XI Congreso Internacional de Actividades Físicas Cooperativas, Avilés, Asturias.
- Fernández-Río, J., & Méndez-Giménez, A. (2014). Self-made materials, cooperative learning and games invention: Great combination for physical education. *Active + Healthy*, 21(2), 29-32.
- Fernández-Río, J., & Morales, P. (2020). Student-designed games in secondary education. Effects and perspectives from students and teachers. *The Journal of Educational Research*, 113(3), 204-212.
<https://doi.org/10.1080/00220671.2020.1778614>
- Fernández-Río, J., & Velázquez, C. (2005). *Desafíos físicos cooperativos: Retos sin competición para las clases de educación física*. Wanceulen.
- González, M. P. (2017). *El sociograma: una herramienta para conocer las relaciones de los grupos*. In J.C. Iglesias, L.F. González & J. Fernández-Río, (2017), *Aprendizaje cooperativo. Teoría y práctica en las diferentes áreas y materias del Curriculum* (pp. 285-295). Pirámide.
- Grineski, S. (1996). *Cooperative Learning in Physical Education*. Human Kinetics.
- Johnson, D., & Johnson, R. (1975). *Learning together and alone*. Prentice-Hall.
- Johnson, D., & Johnson, R. (2009). *Joining together: Group theory and group skills*. Pearson.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (2013). *Cooperation in the Classroom (9th ed.)*. Interaction Book Company.

- Kagan, S. (1992). *Cooperative Learning*. Kagan Cooperative Learning.
- Kagan, S. (2003). *A brief history of Kagan structures*. *Kagan Online Magazine*. (Summer). www.kaganonline.com/KaganClub/FreeArticles
- Kirchner, G. (2005). *Towards Cooperative Learning in Elementary School Physical Education*. Charles C. Thomas Publisher.
- Méndez, A. (2011). El proceso de la creación de juegos de golpeo y fildeo mediante la hibridación de modelos de enseñanza. *Ágora para la Educación Física y el Deporte*, 13(1), 55-85.
- Orlick, T. (2002). *Libres para cooperar, libres para crear (4ª ed.)*. Paidotribo.
- Pérez-Pueyo, Á., Hortigüela Alcálá, D., & Fernández-Río, J. (2021). *Modelos pedagógicos en Educación Física: Qué, cómo, por qué y para qué*. Universidad de León, Servicio de Publicaciones.
- Pérez-Pueyo, A., Hortigüela, D., Gutiérrez-García, C., & Fernández-Río, J. (2020). *Rúbrica para actividades cooperativas*. <https://drive.google.com/file/d/13KEuFxBVmnk2nA9Wr0nnDiTdkeN04lO/view>
- Pujolás, P. (2008). *9 ideas clave. El aprendizaje cooperativo*. Graó.
- Slavin, R. E. (2014). Cooperative learning and academic achievement: Why does groupwork work? *Anales de Psicología*, 30(3), 785-791. <https://doi.org/10.6018/analesps.30.3.20120>
- Salonen, P., Vauras, M., & Efklides, A. (2005). Social interaction- what can it tell us about metacognition and co-regulation in learning? *European Psychology*, 10, 199–208. <https://doi.org/10.1027/1016-9040.10.3.199>
- Vygotsky, L. (1979). *El desarrollo de los procesos psicológicos superiores*. Editorial Crítica.

5. ANNEXES

Planning Guide

- 1. First step, what do you want students to know and be able to do?

Example based on the modification of the didactic unit ‘Let’s invent a game of cooperative hitting and fielding cooperatively’ by Méndez (2011).

- 2. Big Picture Goal:

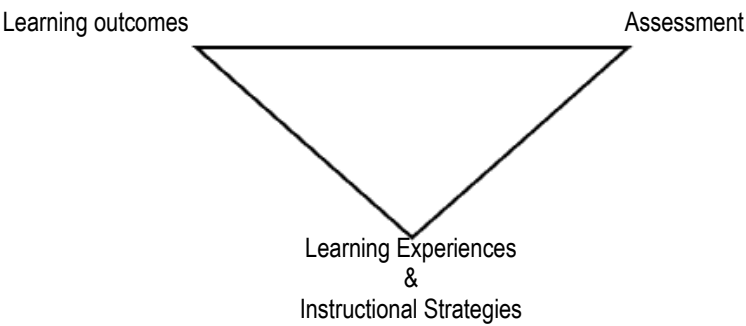
The general objective is to encourage cooperative work and creativity in order to invent cooperative games on land and in the aquatic environment.

- 3. Big Picture Assessment:

A formative evaluation will be carried out, based on individual and intra-group self-evaluation using the rubric of cooperative activities and a self-evaluation relating to the invention of games, which will make it possible to be aware of progress and aspects that can be improved in order to reorientate, if necessary, individual behaviour and cooperative work.

- 4. How do we facilitate student learning to reach goals and successfully complete assessments?

Plan for student learning to achieve learning outcomes



Students learn about	Students should be able to	Learning Experiences	Instructional Strategies	Assessment
Analysis and knowledge of cooperative play.	To analyse the co-operative games experimented and those created a posteriori in a co-operative way, in terms of rules, space, material, number of participants, etc.	Experiment with cooperative games and analyse their elements afterwards.	Experiment with cooperative games in aquatic and terrestrial environments, analyse their elements. Cooperatively elaborate others by changing their elements.	Through curricular evaluation material.
Developing creativity.	Design, show and dynamise new co-operative games, and take into account feedback to readjust them.	Combine experimentation and analysis to design new cooperative games.	Encourage pupils' creativity, with tasks of inventing new co-operative games: by brainstorming and varying the structural elements of the games, e.g.	Individual self-assessment on the invention of games (modified from Méndez, 2011)
Developing cooperative work.	Experiment and design cooperative games in a cooperative way, contributing during the process and in the demonstration and implementation of the games.	By proposing stable heterogeneous and balanced groupings.	All elements of cooperative learning are encouraged.	Individual and intra-group self-assessment using the rubric of cooperative activities.

DAILY SEASON PLAN:

Lesson	Plan	Assessment
Day 1	Introduction to the objectives of the unit 'We design and experiment with new cooperative games', based on Cooperative Learning. Presentation of the curricular materials and evaluation instruments to be used in the unit. Formation of the stable working groups, 4 groups of 6 components, heterogeneous in terms of gender and skill level. The groups can be drawn up by the teacher or 4 pupils can be chosen by the teacher as 'heads of series'. A draw is made as to who begins to choose the members of each team, with the aforementioned criterion of heterogeneity; and finally a draw is made as to which of these voters is going to be in each team, not directly forming part of the team that has been formed with the teammates that have been chosen. Group reflection.	Initial assessment of the situation of the class group in relation to cooperative games: homogeneity and heterogeneity in terms of their knowledge, mastery of the medium/skill, interest, creativity, etc.
Day 2	Introduction to the session. Work in stable groups: 1st Description by the teacher of a cooperative game in a terrestrial environment, and of a modification of the same. Experimentation of both. 2nd Analysis of the games played. Individual and intra-group self-evaluation and group reflection.	Self-assessment through rubric of cooperative activities.
Day 3	Introduction to the session. Work in stable groups: 1st Description by the teacher of a cooperative game in an aquatic environment, and of a modification of the same. Experimentation of both. 2nd Analysis of the games played. Individual and intra-group self-evaluation and group reflection.	Self-assessment through rubric of cooperative activities.
Day 4	Introduction to the session. Work in stable groups. Invention of a cooperative game in a terrestrial environment (pavilion or multi-sports court). Individual and intra-group self-evaluation and group reflection.	Self-assessment through rubric of cooperative activities.
Day 5	Introduction to the session. Work in stable groups. Invention of a cooperative game in an aquatic environment (swimming pool). Individual and intra-group self-evaluation and group reflection.	Self-assessment through rubric of cooperative activities.

Day 6	Introduction to the session. Work in stable groups. Proposal of a cooperative game created in session 4, in a terrestrial environment and putting it into practice with the other groups (terrestrial environment). Exchange of impressions and feedback about the fluency of the game, its appropriateness and the degree of fun provoked. Contribution of variants or modifications of rules. Group reflection.	Self-assessment through rubric of cooperative activities.
Day 7	Introduction to the session. Work in stable groups. Proposal of a cooperative game created in session 4, in a land environment and put into practice with the other groups (aquatic environment). Exchange of impressions and feedback about the fluency of the game, its appropriateness and the degree of fun provoked. Contribution of variants or modifications of rules. Group reflection.	Self-assessment through rubric of cooperative activities.
Day 8	Introduction to the session. Work in stable groups. Proposal of a cooperative game created and put into practice with the other groups (land environment). Group reflection.	Self-assessment through rubric of cooperative activities.
Day 9	Introduction to the session. Work in stable groups. Proposal of a cooperative game created and put into practice with the other groups (aquatic environment). Group reflection.	Self-assessment through rubric of cooperative activities.
Day 10	Presentation of the session. Recording of a video in order to disseminate the invented games (terrestrial medium). Group reflection.	Self-assessment on game invention*.
Day 11	Presentation of the session. Recording of a video in order to disseminate the invented games (aquatic environment). Group reflection.	Self-assessment on game invention. Final evaluation of the unit.

Self-assessment on game invention:

Self-assessment

1. What game has my group invented?
2. What did I like most about our game? What makes it fun?
3. What ideas have I contributed to the construction of our game?
Have you politely accepted or criticised other people's ideas?
4. Apart from the game my group invented, what is the other game you liked the most? Why?
5. Name the other games created by the other groups and indicate one positive aspect of each one and one aspect that could be improved, if there is one.
6. Do all these games created belong to the same category of cooperative games? Why?
7. Self-evaluation from 0 to 10 in each of these roles, taking into account the rules that had to be fulfilled in each case:
As a player I would give myself a ____ because _____.
As captain I would give myself a ____ because _____.
As an evaluator I would give myself a ____ because _____.
As a material manager I would give myself a ____ because _____.
As a group inventor I would give myself a ____ because _____.
8. Did we experience any conflicts during this didactic unit and how did we resolve them?

Source: modified from Méndez (2011, p. 77).

- PART 2 -

ADVENTURE EDUCATION

FRANCISCO SEGADO SEGADO
Catholic University of Murcia, Spain

AARÓN MANZANARES SERRANO
Catholic University of Murcia, Spain

1. INTRODUCTION

The use of the natural environment as a setting for teaching and learning activities has been present in educational experiences to a greater or lesser extent (McKenzie & University, 2003). However, it is nowadays that they are regaining greater importance due to several factors.

The first is due to the benefits of activities in the natural environment; the benefits of practices in the natural environment have been widely demonstrated, according to various authors they cover all the dimensions of the subject (McKenzie, 2000). For Baena Extremera and González Melero (2024), leaving the comfort zone and usual environments such as the teaching centre leads to greater involvement of students in the teaching process, which facilitates the comprehensive development of students (psychological, cognitive and motor), and physical activities carried out in the natural environment, especially the marine environment, are a real generator of health.

These benefits are further enhanced in the marine environment, also called *blue spaces* (Rocher et al., 2020), and sailing can be considered as a peak experience. That is, a learning experience more intense than usual experiences, with its effect on time being more lasting or even accompanying the person throughout his or her life (Mc Culloch, 2007; Mc Culloch et al., 2010; McKenzie & University, 2003).

Nautical activities in any of their manifestations are an intense experience that involves a certain amount of risk and adventure. There is a greater sense of vulnerability in the marine environment, sailing is a real experience, full of uncertainty during sailing actions, students become aware of their individual value and how their actions (going out on one side of the beach or another, choosing one material or another...) have a consequence on their safety and well-being of the rest, issues that are undoubtedly key to the development of integral individuals (Mc Culloch, 2007).

Activities in the marine environment are tasks that are far removed from most people's daily lives. Precisely that component of unprecedented experience helps to level out many preconceived ideas and behaviours. When entering the nautical dimension, one is entering a new world

where the social dimension is subordinated to learning totally unfamiliar skills (Henstock et al., 2013).

The second factor influencing the rise of activities in the natural environment is determined by the increase in demand for them outside the educational environment, with a significant increase in federal licenses for sports such as water sports and mountain sports. Active leisure companies in the natural environment have increased not only in number but also in product portfolio and extension of the season (Hurtado Barroso et al., 2024). This situation offers future sports science graduates a market niche of great strength and projection, but faces the absence of training activities in the curricula of sports science faculties, where activities in the natural environment and specifically in the marine environment are residual (González-Melero et al., 2024; Hurtado Barroso et al., 2024; Schram & Furnes, 2017).

The third factor in the increase in the practice of water sports in the natural environment can be attributed to the revolution in materials; the design of new materials has made possible, on the one hand, the appearance of new practices that are safer and less difficult. Traditionally, nautical leisure has been associated with high socioeconomic levels and the sea was seen as a very hostile environment. Thanks to the appearance of plastic materials and the appearance of modalities such as Paddle Sup, among others, nautical leisure has become an affordable and accessible environment for most segments of the population (Serra et al., 2020).

It can be seen, therefore, that the use of nautical activities can be a content-enhancing stimulus. But these benefits must be supported by a proven methodology that guarantees the achievement of the objectives. This issue, in the case of Padel Sup, is currently underdeveloped in the literature, which is why we intend with this chapter, through an approach using the Adventure Education (AE) model as one of the main emerging pedagogical models in PE and recreational and leisure activities in the natural environment, to provide future graduates in sports science with tools for effective and motivating teaching in the marine environment (Castañeda-Babarro et al., 2022; González-Melero et al., 2024; Pérez-Pueyo et al., 2021).

But the practice of these activities must be supported by contracted methodology and didactics, for this reason, in our proposal, we therefore intend to answer the questions of how to apply the AE model in a Paddle Sup session with university students and what benefits does the use of this teaching methodology bring them?

The use of AE for pedagogical purposes began in the 40s of the 20th century, and more recently, we can frame its turning point and its greatest use in outdoor AE programs (McKenzie & University, 2003). Under the umbrella of AE we can find different terms (Adventure Learning, Challenge Ropes Course, Adventure Pedagogy, Adventure Education) all of them have been based on experiential education and in common that they use an unfamiliar environment such as the marine environment, to offer students experiences as a challenge to be solved individually and in groups where the risk/adventure must be perceived by the student, such is the projection of these methodologies that they are even valued as tools of social justice (Melero et al., 2023; Rose & Paisley 2012; Williams & Wainwright, 2020).

The use of AE in Paddle Sup sessions is easily justifiable in that it allows us to adjust this methodology through the design of unusual tasks in an unusual environment (the marine environment) in which it is common to have to solve problems that involve a motor and cognitive response by students, with a degree of risk/uncertainty inherent to the marine environment. Sailing through any of the manifestations of nautical leisure is in itself a challenge full of cognitive dissonance, favouring the integral development of students, all of which are characteristics of AE (Baena-Extremera, 2011; McKenzie, 2000).

2. THEORY, STRUCTURE, CORE ELEMENTS, AND BENEFITS

As we have already seen, the concept of AE is not new, since the use of the natural environment as a classroom has been practiced since the time of the Greek philosophers, such as the Aristotelian school, in which they used their walks ('peripatetic') as a tool to improve the integral education of the pupil. But in more recent times, EA has tried to bring together

teaching and learning experiences in the natural environment or in an unusual environment for students. And it is precisely the perception of the unusual environment that awakens in the pupils' emotions such as risk, uncertainty, and, in short, adventure. In this case, the marine environment is particularly useful for this effect thanks to its continuous instability and uncertainty. These qualities of EA promote the physical, social, emotional, cognitive, and moral development of students.

The key to AE is to provoke cognitive dissonance in students by placing them in an unusual environment where they must solve motor and cognitive problems first individually and then in groups. In order to achieve cognitive dissonance, it is essential, according to the AE approach, to first carry out an initial assessment in which we learn about the students' previous experiences, as well as their starting level. And always ending the activities with a group reflection after each task and another individual one at the end of each session, in this reflection, we must establish connections with the situations experienced in the sessions and the daily life of the students.

We must then ask ourselves how to use AE in the marine environment or what basic characteristics the literature establishes that AE activities or tasks should have: a) they should always take place in unfamiliar spaces, b) small groups, and c) no less than 4 sessions, where the teacher plays the role of a guide who proposes challenges of varying degrees of autonomy. Most of the authors consulted state that the activities, tasks or games should have the following progression and meet five requirements (González-Melero et al., 2023; Williams & Wainwright, 2020).

1. Games where they get to know themselves and others in relation to the skills and qualities that will be required for the specific tasks that follow. In this way, the learner is put in front of the challenge to be achieved. These initial activities or tasks are always carried out outside the natural environment and in a totally exploratory way. We must answer the following questions: Which motor skills are essential for the final tasks (balance, strength, etc.)?
2. Teamwork through initiation activities, these are motor gestures more similar to the final tasks, but where the resolution

of the problem through teamwork is essential. These tasks will be made up of groups of four or five students.

3. Confidence activities where students must assume their own responsibility and that of their classmates, where safety is a shared responsibility. Always with a controlled level of risk.
4. Activities similar to the final tasks, but with little risk, using the same material as the final tasks, and in the natural environment, but with a very low level of risk perception.
5. Final activities of complete risk where the perception of uncertainty/risk is high, and the final technical gestures to be developed with the task's own material are incorporated.

The AE sessions do not have a totally rigid structure, but can be adapted according to the needs of the environment and the previous experience of the students. These sessions are structured around the classic design of a PE session: initial part (information, warm-up...), main part, and return to calm. Most of the authors consulted state that, from the outset, PE sessions should have the following phases, which, although they are described below in order of practice, some of them will be developed together:

2.1. Experiential and Knowledge Phase

2.1.1. Activities of self-awareness of their possibilities

The tasks designed focus on self-awareness, knowledge of their possibilities for the Paddle Sup or skills necessary for the development of the activity (balance / strength), the material (board, paddle) and the environment (marine environment). In this sense, an initial assessment should be carried out with several functions (diagnosis, challenge...) with questions such as:

- Have you ever practised Paddle Sup?
- Do you think you are capable of making a short crossing and coming back on your own?
- Are you afraid of the sea?
- Do you know the Paddle Sup equipment? And how to use it?

In this first block, two skills will be the protagonists: balance and paddling with the hand as a transfer prior to the use of the paddle. Once the tasks/games have been completed, there will be a group reflection on the activities carried out.

2.1.2. Activities to get to know each other's possibilities as a working group

These activities will focus on the role of group sailing; we never sail alone, and a partner watches over us, and we watch over the others. We will finish these tasks with a group reflection on aspects such as the importance in daily life of being aware of others, or how sometimes we need to depend on others. Mutual dependence and the feeling of belonging to a group will be one of the competencies to be developed in these activities.

2.1.3. Activities to get to know the specific material and facilities

The set of tasks and games proposed will be aimed, on the one hand, at getting to know the Paddle Sup equipment and the marine environment, not only the knowledge of how it works, but also the loss of fear of the marine environment and confidence in the equipment. They will get to know the safety margins of both the equipment (board, paddle, invention, waistcoat) and the marine environment (windward / leeward). In this way we will progress from shallow to deeper waters.

2.1.4. Group reflection and self-reflection activities

At the end of each of the tasks, there will be a group reflection on each of the activities. In this reflection, the teacher will be the guide for the reflections. But once the session is over, the student will have to make an individual reflection in writing (he/she can take it home) where he/she will answer the same questions that have been discussed in the group.

2.2. Practical Phase

2.2.1. Challenging activities and problems with the modification of the real situation

Consisting of tasks and games focused on proposing situations similar to real sailing but with small modifications/adaptations, they will explain different forms of paddling, paddle grip, or support on the board. There will be a combination of autonomous work in pairs and groups. At the end, there will be a group reflection on the activities carried out and their transfer to other situations.

2.2.2. Analytical practices in a real situation

These tasks or games will be aimed at individual work in navigation in real conditions with each student, making the student focus on those aspects and situations where he/she finds more difficulties. The reflections of these practices aim to analyse as a group where each student encounters more difficulties.

2.2.3. Challenge activities and problems with a real global situation

In this block, games, tasks, or activities will be designed in a real situation in which students must solve more or less unexpected problems/challenges that may arise during navigation. The feeling of autonomy will be one of the competencies on which the activities developed in this phase will emphasize. Reflections after these activities will focus on the unexpected difficulties that have arisen during sailing.

2.2.4. Group reflection and self-reflection activities

As we have done in the previous phase, at the end of each task, the reflection will be of a group type, but at the end of the sessions, the student will take home a notebook of reflection and individual evaluation that collects their personal evaluations, always looking for a link with their real life.

The evaluation in AE is characterised by being a formative and summative evaluation; it must have an initial evaluation that includes theoretical aspects such as previous knowledge of the material, its use, necessary

techniques, or knowledge of the natural environment where it is going to be developed. This initial assessment should also include practical aspects such as the correct use of the equipment and safe behaviour in the natural environment (González-Rivas et al. 2022).

The assessment will always seek to verify the acquisition of emotional and social motor skills.

One of the main functions of evaluation in this model is for the student to internalize the true meaning of AE, for which it is essential that the student reflects on his or her experiences during the sessions and once they have finished. For this purpose, reflection in any of its forms, minimalist, guided by the teacher, but above all metaphorical, must permeate the evaluation process (Baena-Extremera, 2021; McKenzie, 2000). According to Pérez-Pueyo et al. (2021), the essential presence of reflective and metaphorical assessment is largely since AE aims to transform capacities and learning, i.e. that the student acquires a set of competences that allow him/her to solve motor problems, but also personal, emotional and social ones, guiding him/her through reflection in a process of emotional, social and motor change.

When to evaluate AE will always start with prior information to the students about the evaluation criteria and the corresponding timetable, where the challenge, as an inseparable component of the adventure, is recorded. An initial evaluation must be carried out, which is essential in AE in order to adapt the task to the level of the group, thus fulfilling the function of diagnosis of oneself, as a member of a group, and of the material and means to be used in the sessions. We will continue with a continuous evaluation in which continuous feedback will be given to the students, thus guaranteeing the formative component of the evaluation. To finish with a final or summative evaluation where the student can be aware of and internalize his or her transformation.

Finally, we must answer the question of how or with what tools we can evaluate the EA model. The authors consulted agree that almost any instrument can be used, but the most suitable are usually (Baena-Extremera, 2021; McKenzie, 2000, McKenzie & University, 2003; Pérez-Pueyo et al. 2020; Rocher et al., 2020).

- Behavioural record or checklist with dichotomous scale (YES / NO).
- Observation scale or rubric, with Likert scale (1 Very poor / 5 Excellent).
- Diary or anecdotal record (critical incident technique).
- Objective tests or tests with dichotomous scales (True / False).
- Performance tests where technical aspects are observed and evaluated (material handling, speed, safety).
- Questionnaires on the perception of the impact of the sessions on the learner's self-concept, personal skills, or motivations. Likert scale (1 strongly disagree / 5 strongly agree).

3. PRACTICAL RESOURCES ABOUT HOW TO APPLY AND ADAPT PEDAGOGICAL MODELS

The objectives that we are going to pursue with these Paddle Sup initiation sessions are:

1. To acquire the basic skills and abilities of Paddle Sup paddling, guaranteeing autonomous and safe paddling.

1.1 To adapt paddling (body scheme, physical, perceptual-motor and coordination abilities, motor skills and abilities, applying processes of perception of the marine environment, decision and execution) in different sailing situations, in order to give a response adapted to the demands of the environment and to one's own possibilities.

1.2 Develop the ability to manoeuvre the board in different directions (turns, forward and backward), facilitating total control over movement in the water.

1.3 To teach basic self-rescue methods and balance techniques on the board, facilitating the ability to regain stability and autonomy in the water.

2. To appreciate the use of Paddle Sup as a tool for the development of healthy nautical leisure and group sailing.

- 2.1 To encourage the practice of Paddle SUP as an outdoor recreational alternative, which allows connection with nature and promotes an active and healthy lifestyle.
 - 2.2 To encourage teamwork and group cohesion through group sailing activities, reinforcing values such as cooperation, communication, and mutual support among participants.
 - 2.3 To promote respect and conservation of the marine environment through the responsible practice of Paddle SUP, raising awareness among participants about the environmental impact and the importance of preserving aquatic ecosystems.
3. To know how to handle the elements that make up Paddle SUP sailing, as well as the environment in which it takes place. Ensuring the safety of oneself, others, and respect for the aquatic environment.
- 3.1 Promote the proper use of Paddle SUP equipment (board, paddle, lifejacket, invention) and its maintenance, ensuring a safer and more prolonged sailing experience.
 - 3.2 Develop the ability to identify suitable environmental conditions for Paddle SUP paddling, understanding how factors such as wind, currents, and swell affect paddling.
 - 3.3 To foster self-confidence and decision-making in real sailing situations, developing the ability to react appropriately to possible emergencies or changes in the environment.

4. This proposal will be aimed at university students of Physical Activity and Sport Sciences (10 students) with no previous experience in Paddle Sup sailing. In this way, we intend to provide future teachers with a teaching methodology in water sports based on the AE model.

We are going to design three two-hour sessions, although the authors state that the minimum number of AE should be four sessions. In our case, given that we work with university students and in nautical sports, the preparation and transfer of material takes up a lot of time in the sessions. We opted for fewer sessions, but longer than the usual 45' or 1 h of PE.

As an initial evaluation, we have chosen two tools aimed at finding out the students' previous knowledge about Paddle Sup and the marine environment, as well as their self-concept about their performance in the marine environment. The two instruments chosen are two questionnaires, the questionnaire on Paddle Sup contents will consist of 15 questions (true/false) that will be repeated at the end of the sessions as a final evaluation (Table 4).

TABLE 4. Students' previous knowledge and self-concept questionnaire.

Previous knowledge and marine environment self-concept questionnaire		
1. Have you ever done Paddle Sup?	YES	NO
2. Do you know the paddling technique in Paddle Sup?	YES	NO
3. Do you have any knowledge about Paddle Sup material?	YES	NO
4. Do you have experience in the marine environment?	YES	NO
5. Do you have knowledge about meteorology?	YES	NO
6. Do you know how to identify the direction of the wind?	YES	NO
7. Do you see yourself capable of doing a Paddle Sup trip?	YES	NO
8. Are you afraid of the sea?	YES	NO

Paddle Sup content evaluation questionnaire (True / False)		
1. To maintain balance on the SUP paddle board, it is recommended that your feet be shoulder-width apart.	T	F
2. The leash or invention is not necessary when practicing Paddle SUP in calm waters.	T	F
3. The recommended posture in the table is with your knees slightly bent and the body centered on the board.	T	F
4. Upwind is the place where the wind goes	T	F
5. It is important to check the weather report before each Paddle SUP departure.	T	F
6. Paddle SUP is an activity that does not favor development of social skills, since it is mainly practiced individually.	T	F
7. Paddle SUP is a low-impact activity that helps improve cardiovascular endurance and muscle strength.	T	F

8. To start correctly, we must first do some balance exercises on the board and/or paddling on your knees, before starting to paddle standing up.	T	F
9. To finish a session in Stand Paddle Surf we will do paddling from Upwind	T	F
10. In the safety position I have to bring the shovel parallel to the center line of the board and with the blade under the chest, and the pole by the bow.	T	F
11. The safety position is used to reach land in case of bad weather.	T	F
12. The practice of Paddle SUP has no impact on the environment and does not require precautions to protect the environment.	T	F
13. The height of the paddle handle should be right at the wrist height	T	F
14. Rowing only with your arms, without moving your trunk, is the technique correct to optimize strength in Paddle SUP.	T	F
15. To maintain balance on the board we must look around us.	T	F

After the initial evaluation, the didactic objectives of the sessions will be explained to the students and all the activities and evaluation tools will be described, as well as the schedule.

3.1. Session 1

1. Presentation of Paddle Sup (Dry).
2. Loss of fear of water and board: Balance games.
3. Lying manual row – knees.
4. Basic rowing/chest safety position.

3.1.1. Self-knowledge activities and activities to learn about the possibilities of others as a work group

Explanation of the characteristics of the Paddle Sup (material, uses), explanation of the assembly and transportation of the material (board, paddle, invention, and vest).

1. Static balance in the sand.
 - It would consist of a battery of individual experiences with the board in the sand where the student individually must perform different supports on the board, for 5” alternating legs: the

- crane, knee flexion, 04, leg extension, the angel, the pendulum.
 - In pairs and alternating the different supports, transfer the vest from one board to the other (first one vest and then both).
2. Dynamic balance in the sand.
- Individually, move on all fours, move on foot (forward, behind, lateral), with small jumps, with 360° turns.
3. Static balance in water.
- The Paddle board will have the more or less stable areas marked with tape or stickers; in this way, we encourage reflection on why areas are more or less difficult to move on the board. The activities will be carried out in the water, with water up to the knees, and changing partners so that all students become aware of the group's difficulties.
 - Repeat the battery of static balance experiences done in the sand.
4. Dynamic balance in water.
- In pairs, repeat the battery of dynamic experiences in the sand.
 - Move on the board, moving material (throwing the vest up, carrying the paddle like a tightrope walker...)
 - Move on the board with the vest over your head.
 - Pushing the vest on the board with your feet, dragging your feet.
 - Move from the front and side, the partner throws the vest, and the other returns it.
 - Walk on the board with two objects (a vest in each hand).
 - Pass obstacles on the board (two vests).
 - In pairs fight with churros.
5. Reflection.

At the end of this battery of activities and tasks, questions will be asked to the group as a reflection, with the aim that the students reflect on how it is easier to move on the table, always trying to make transfers to everyday life. Questions and style reflection:

- How is it easier to move around the table?
- Why is it harder for student X and easier for student X?
- Do you think this same thing can be extrapolated to everyday life? We will encourage you to contribute your ideas.
- How is it best to face life's challenges? With greater stability (base of support / centre of gravity)? Is it important in life to have a clear goal (is it important to focus on maintaining balance)?
- When we fell and got back on the board, did I surpass myself in something? It is normal to have failures in life, but we get up and continue. Do we need mental strength in addition to other abilities such as balance or strength?

3.1.2. Activities to learn about the material and specific installations

During this phase, content such as manual paddling (lying on the board/knees), basic safety position, and the concept of windward and leeward will be worked on as a fundamental element of knowledge of the marine environment.

All activities will be designed so that the student gains confidence, assuming their safety and that of their classmates, recognizing the function of the vest and the invention. For this reason, progress will be made from activities in shallow areas to deeper areas.

1. Marco Polo!

In two groups, each with their board and in a basic safety position, we paddle with our hands, one student with his eyes closed tries to catch the rest, saying Marco, and the others answer Polo. First, you will row with one hand and then with both.

2. The Blind Snake.

The two caught by the invention, in pairs on a board in the same position as before, the partner in the bow has his eyes closed, and the one lying behind guides him with touches of the hand. The whole group is together; they must catch another couple. As an initial activity, you can take a route parallel to the shore.

3. Relay Race.

In this game, you go as far as the students can't stand, always placing the circuit in a windward/leeward direction. The students are divided into two groups, sitting in a row on the beach, and they must do a relay race to a beacon placed 30 m away.

4. Shark / Mermaid / Triton.

In a place next to a dock with sufficient depth, all the boards with the inventions are gathered together, forming a closed space; not all the boards have to be there. One student is placed floating in the centre, and the rest are placed outside around the boards. The one in the centre shouts Medusa! Everyone quickly gets on the board, Mermaid! They change tables to the left, Triton! They change tables to the right, Seagull! Go under. The last one to get on goes to the centre.

5. The Island.

All the boards held by the stern with the device at a fixed point, one board less than students. By shouting "Shark!", boards will be removed to check their buoyancy.

3.1.3. Reflection

Next, we carried out a new group reflection. Everything is oriented towards trust in the material, in the partner, and loss of fear of falling and getting back up where they can't stand. Questions will be asked, such as:

- Is it easy to stay afloat with the vest?
- How many students does a table support?
- Do inventions keep us together?
- How is it easier to row to windward or leeward?
- If I fall, can I get back on the board?
- What do you suggest to have things that float and where to stand when we fall in daily life?
- Is it important to have buoyant elements in life? What elements in life always keep us afloat and we should never abandon?

The questions asked in groups will be provided to the students so that they can answer them individually and be part of the evaluation process. They will deliver them before the second session.

3.2. Session 2

This session will be characterized by more technical and analytical work using the shovel. The different ways of paddling, gripping the paddle and positions on the board, both standing and kneeling, will be explained. Progress will be made in terms of more and less calm waters and in terms of greater and lesser depth. The challenge component will always be present in the explanation of the activities.

3.2.1. Challenge activities and problems with the modification of the real situation

The first three activities will be carried out parallel to the shore (shallow depth) and looking for leeward (calm waters).

1. Technical Trips.

Individually, each one with his board and complete equipment around a route formed by two markers separated by 20 m, the students must make routes around the markers performing different types of paddling (straight, semi-circular, changing sides), in different positions. in the table. First, kneeling on the board and then standing, they must perform at least 3 crawls for each technical gesture.

2. Remote Control.

The teacher and a student will always be on the beach. The teacher will give continuous feedback to the student about the technical performance of the rest of the students.

The group advances shovelling freely, one of the students performs a series of three technical gestures, and the rest must imitate him. While the student on the beach with a whistle regulates the rhythm of the actions:

- 1 beep, the students do the actions in slow motion.
- 2 beeps, the students do the actions to the normal camera.

- 3 beeps, the students do the actions in fast motion.
- All students must go to the beach.

3. The Sea Mirror (sum of steps).

In pairs, each with their board, one of the two performs a sequence of 3 technical gestures, the partner repeats them and adds a 4th, and so on until one of the two is unable to repeat the sequence. On the beach, the teacher will be with another student to whom he provides feedback. A variant can be done, including the beeps as in the previous activity.

4. Reflection.

- We have observed that during the activities, we must perform different types of paddling and positions on the board. Can we always paddle the same? Because? We wait for the students' responses and guide the reflection towards the fact that each situation requires a different form of paddle. If I am paddling to windward or leeward, if I have to turn, if I want to maintain a direct course with the wind, if there is a big wave. We see that to continue rowing and reach our destination, we must adapt our technical gestures
- How can we extrapolate this situation to our daily lives? We see that during our daily lives, we encounter changing situations to which we must give different responses, although sometimes we make mistakes. Do you remember any situation in which you had to adapt your response? Anywhere you made the wrong decision?
- When the decision is wrong during navigation, what happens? We fall or we don't reach our destination. This helps us establish a relationship with our life journey; even though we fall and do not reach our destination, we continue paddling and learning from our mistakes.

3.2.2. Analytical practices in a real situation

In this phase of the session, we will seek to paddle with waves and deep waters.

1. Relay Game.

The class is sitting on the beach and divided into two groups; each group must do a relay race to their beacon placed 30 m away. The student must leave the paddle and board on the shore to take over.

3.2.3. Reflection

- We will emphasize those students who found it more difficult to complete the route and why.
- Who has had the most difficulties completing the route? And why?
- Who least? And why?
- What could those who had more difficulties doing the route do?
- Extrapolating to daily life, does the same route cost us all the same? When is the same situation different for some and for others?
- Do you think you will always face the same challenges/routes? Or do things cost us more on some days and less on others? Do we always face challenges in the same way?

The questions asked in groups will be provided to the students so that they can answer them individually and be part of the evaluation process. They will deliver them before the second session.

3.3. Session 3

3.3.1. Challenge activities and problems with a real global situation

The activities of this session will aim to present the student with challenges and the resolution of more or less unexpected problems, to move towards autonomy in the student's navigation.

History of the Gymkhana: “The Journey to the Hidden Island”

Common Thread: The students are explorers of an ancient civilization in search of the Hidden Island, a place of legends located in the Mar Menor. According to stories, this island is only revealed to those who know how to work together and face difficulties with resilience. Throughout this journey, they will have to decipher clues and overcome

unknown challenges, testing their abilities to adapt to the environment and their ability to collaborate.

Objective of the Journey: Reach the “Hidden Island” by overcoming obstacles and challenges that imitate the real difficulties of SUP paddleboarding. At each post, a clue will take them closer to the final goal, but only teamwork and creativity will get them to the end of the journey.

Post Development

Start of the Adventure (On the Shore)

Students (in pairs) receive an initial map and a letter explaining the mission: “Explorers, your journey to the Hidden Island begins here. According to legend, only those who prove themselves worthy of working as a team will be able to reach it. Each challenge overcome will bring them a little closer. Let the journey begin!”

Post 1: The Ritual of the Lost Elements (Location: Coast, left side of the pier)

History of the Post: “To begin the journey, they must recover the objects that symbolize the elements necessary for the journey. These objects have been lost in the waters near the coast and are essential to continue.”

Activity:

1. Teams must locate and collect various floating or submerged objects (representing “power objects” or resources such as “the compass,” “the board,” “the vests,” “the shovel,” “the leash,” and “a tow rope or tail line”, in the water near the coast and in the sand. They simulate the construction of the basic navigation elements.
2. They must be organized to recover these objects quickly and without losing sight of any team member.

Reflection: They reflect on the importance of having the necessary resources and taking care of them on the trip, as well as maintaining communication and support within the team.

Clue to the next post: “To continue, sail to the third floating pontoon on the dock. There is a new key awaiting them to advance on their journey.”

Post 2: The Unknown Current (Location: First pillar of the pier, left side)

Post Story: "A stretch of strong currents stands in the way of the Hidden Island. They must work together to move forward and not get carried away."

Activity:

1. Students must row in a coordinated manner to the 3rd floating pontoon. They have a shovel, and their ingenuity to both reach the same board. When they arrive, they will get an improvement and at the same time a difficulty that is another board and another paddle. At this point, they must decide how many elements they choose. They can decide to take everything (1 board and 1 shovel), one of the elements (1 board or 1 shovel), or none.
2. The task is to reach a specific point on the pier as a team, with no member left behind.

Reflection: They learn the importance of coordination and teamwork to face the forces that go against them.

Clue to the next post: "Go to the rock pinnacle (long yellow beacon), there you will receive more information. The next challenge lies in deeper waters, where the secrets of the sea are hidden."

Post 3: The Secrets of the Sea (Location: Second pillar, right side of the pier)

Post Story: "In deeper waters, the sea hides mysteries. To continue, they must discover and collect the key pieces that will open the way to the Hidden Island."

Activity:

1. In this challenge, the teams must find and follow the clues with the help of the compass. At the pinnacle (beacon) you will find an orientation towards which you must navigate (SE). If you follow that line, you will find a floating track that will indicate the next course in which you should navigate. This way, they will continue the route of 3 – 4 tracks until they reach the next point on the route.
2. To locate these objectives, they must use balance on the board

and maintain stability, and have a vision of the environment that surrounds them, stopping focusing their attention on their feet and hands, to look around for objects that they float and will give them new clues. As an example, if from the pinnacle the heading is SE and on the horizon, it coincides with the peak of the island of Barón, I must navigate all the time with that direction to be able to find the next indication. There may be other items scattered around that give wrong clues or send you back to the start.

Reflection: They reflect on the importance of observation, patience, and how to support each other to achieve a common goal in more complicated conditions.

Clue to the next post: "Continue towards the end of the pier, where the waters are deep, and the path becomes uncertain. Here they will face an obstacle that they can only overcome together."

Post 4: The Trial of the Seasick (Location: Point of the pier, in deep water)

Post Story: "Upon reaching the deep area, the waves and currents intensify. One of the boats has been damaged, and the only way forward is for the team to help each other."

Activity:

1. They simulate that one of the tables is "damaged". Upon arrival at post 4, sailors will change their boards for boards with low pressure or without a fin, which makes navigation and balance very difficult. To pass this test, both members must complete a tour with these boards, adapting their paddling technique and position to this situation. Navigators can help each other to solve this route. When they have completed the tour they will recover their material in good condition.
2. Teammates must devise a way to continue advancing with the entire team, adapting their position and technique to the difficulties.

Reflection: They reflect on how to support each other in difficult times and the importance of helping colleagues so that everyone can complete the journey.

Clue to the next post: “The last one begins when darkness appears. At this moment, they receive a mask, and one of the members must put it on.”

Post 5: The Journey of the Final Unit (Location: Near the shore, right side of the pier)

Post Story: "They are about to reach the Hidden Island, but to do so, they must demonstrate that they have become a solid team. The last leg must be done in total synchronicity, demonstrating unity and control."

Activity:

1. Teams must row to the next pinnacle in complete darkness. One member of the team puts on the mask and the other will give directions to get to the first pinnacle. In this you will find the indication that you must now exchange roles until you reach the shore. There is only one way to enter the hidden island, and it is completely at night. When you row at night you are able to sharpen the rest of your senses to locate elements that only hearing and touch are capable of.
2. They must coordinate to row together and follow the instructions of their partner and their sense of hearing.

Final Reflection: They reflect on how teamwork and collaboration led them to the “Hidden Island” and how these values can be applied in everyday life.

Reflection and Closing of the Gymkhana.

At the end, the teams meet to reflect on the trip made. The “Hidden Island” represents not only a physical goal, but also a symbolic goal: the importance of facing the unknown, supporting each other, and overcoming challenges together. Through this experience, students have discovered that the true reward is in how teamwork and resilience are essential to overcome any obstacle.

Post Location and Logistics

Post Location:

Post 1: Left side of the pier, near the coast.

Station 2: On the third floating pontoon to the left of the dock.

Post 3: On the left side of the dock, between it and the breakwater in the deep water area. They must follow the signs until they reach the other side of the pier, near the “lighthouse.”

Post 4: Point of the pier, next to the lighthouse, in deep waters.

Post 5: Start at the “lighthouse” of the dock, follow the route of 1 beacon crossing the exit channel, and head to the shore on the right side.

Necessary Resources:

SUP boards, paddles, animal figures, chests, or laminated images of objects, maps, and tracks in waterproof envelopes, and any item that can add resistance in the water to simulate currents.

This design allows students to immerse themselves in a story of adventure and discovery while developing navigation, balance, and, above all, teamwork skills. I hope this structure is helpful and motivates students to face the unknown together!

3.4. Reflection

The reflection activities will be aimed at raising awareness of aspects such as the appearance and resolution of unexpected problems, the perception of autonomy and freedom in the marine environment, and collaboration between colleagues.

- Have you had the feeling of having everything under control?
- The problems that have been proposed, how is it better to solve them alone or in a company?
- Have unexpected challenges or problems arisen in your life? Have you faced them alone or with help?
- Have you been nervous when solving problems during navigation? In life, how do you best face challenges?
- What sensations has navigation conveyed to you?

The questions asked in groups will be provided to the students so that they can answer them individually and be part of the evaluation process. They will do them at home the day after finishing the session.

3.5. Final Evaluation

In addition to the diary that the student will carry out individually at the end of each of the sessions, an objective test (true/false) on knowledge of Paddle Sup and the marine environment already provided at the beginning of the sessions, as well as a questionnaire, will be incorporated (1 totally disagree / 5 totally agree) on the student's perception in relation to the impact that the course has had on their self-concept (self-confidence and self-sufficiency), interpersonal skills (cooperation and communication) and motivations (desire to learn and improve) (McKensie & University, 2003) (Table 5).

TABLE 5. Students' perception of the impact of the course.

Self-kno.1	This activity has been an individual success for me.
Self-kno.2	During the development of the sessions, I have overcome my physical difficulties.
Self-kno.3	I have been able to learn new skills.
Self-kno.4	I have adapted to the marine environment.
Self-kno.5	I have achieved the objectives set at the beginning of the course.
Motiv.1	I prefer to participate in activities that allow me to experience wild nature directly.
Motiv.2	I have more freedom to choose the activities that interest me.
Motiv.3	The feeling of freedom in the sea has influenced my desire to continue learning.
Motiv.4	I accept the consequences of my decisions.
Motiv.5	After the course I want to continue trying new experiences.
Inter Hab.1	I have resolved the problems that have arisen in the group.
Inter Hab.2	I have helped everyone achieve their goal.
Inter Hab.3	I have assumed leadership tasks when necessary.
Inter Hab.4	I have interacted with all my classmates.
Inter Hab.5	I have trusted other group members during activities.

4. REFERENCES

Baena-Extremera, A. (2011). Programas didácticos para Educación Física a través de la Educación de Aventura. *Espiral. Cuadernos del Profesorado*, 4(7), 3-13.
<https://doi.org/10.25115/ecp.v4i7.914>

- Baena-Extremera, A. (2021). Educación aventura. In A. Pérez-Pueyo, D. Hortigüela-Alcalá & J. Fernández-Río (Coords.), *Los modelos pedagógicos en educación física: Qué, cómo, por qué y para qué* (pp. 247–272). Universidad de León, Servicio de Publicaciones.
- Baena Extremera, A., & González Melero, E. (2024). Beneficios psicológicos, cognitivos, fisiológicos y académicos que aportan las actividades físicas en el medio natural. Revisión bibliográfica. *EmásF, Revista Digital de Educación Física*, 15(86), 30-44.
- Castañeda-Babarro, A., Balerdi, E., & León-Guereño, P. (2022). Analysis of stand-up paddle boarding: A systematic review. *Retos. Nuevas Tendencias en Educación Física, Deporte y Recreación*, 44, 193-201.
<https://doi.org/10.47197/retos.v44i0.90595>
- González-Melero, E., Baena-Extremera, A., & Sánchez Fuentes, J. A. (2023). A critical look at Adventure Education programs. *Cultura, Ciencia y Deporte*, 18(58), 3-25. <https://doi.org/10.12800/ccd.v18i58.2121>
- González-Melero, E., Granero-Gallegos, A., & Baena-Extremera, A. (2024). Los modelos educativos de educación de aventura desde la perspectiva docente española. *Revista Fuentes*, 26(3), 251-266.
<https://doi.org/10.12795/revistafuentes.2024.21940>
- González-Rivas, R. A., Núñez-Enríquez, O., Ramírez-García, A. A., & Alcañiz-Bernal, C. A. (2022). Inclusión del modelo emergente de Educación Aventura en la Educación Física en México. *Ciencias de la Actividad Física (Talca)*, 23(1). <https://doi.org/10.29035/rcaf.23.1.5>
- Henstock, M., Barker, K., & Knijnik, J. (2013). 2, 6, heave! Sail training's influence on the development of self-concept and social networks and their impact on engagement with learning and education. A pilot study. *Journal of Outdoor and Environmental Education*, 17, 32-46.
<https://doi.org/10.1007/BF03400954>
- Hurtado Barroso, M., González Melero, E., Párraga Montilla, J. A., & Latorre Román, P. Á. (2024). La formación docente en actividades físicas en el medio natural en la Educación Física en España: Un análisis de los planes de estudio universitarios. *Retos. Nuevas Tendencias en Educación Física, Deporte y Recreación*, 56, 681-689. <https://doi.org/10.47197/retos.v56.102899>
- McCulloch, K. (2007). Living at sea: Learning from communal life aboard sail training vessels. *Ethnography and Education*, 2(3), 289-303.
<https://doi.org/10.1080/17457820701547286>
- McCulloch, K., McLaughlin, P., Allison, P., Edwards, V., & Tett, L. (2010). Sail training as education: More than mere adventure. *Oxford Review of Education*, 36(6), 661-676. <https://doi.org/10.1080/03054985.2010.495466>

- McKenzie, M. D. (2000). How are adventure education program outcomes achieved?: A review of the literature. *Journal of Outdoor and Environmental Education*, 5(1), 19-27. <https://doi.org/10.1007/BF03400637>
- McKenzie, M., & University, S. F. (2003). Beyond “the Outward Bound process:” Rethinking student learning. *Journal of Experiential Education*, 26(1), 8-23. <https://doi.org/10.1177/10538259030260010>
- Pérez-Pueyo, Á., Alcalá, D. H., & Fernandez-Río, J. (2020). Evaluación formativa y modelos pedagógicos: Estilo actitudinal, aprendizaje cooperativo, modelo comprensivo y educación deportiva. *Revista Española de Educación Física y Deportes*, (428), 47-66. <https://doi.org/10.55166/reefd.vi428.881>
- Pérez-Pueyo, Á., Hortigüela-Alcalá, D., & Fernández-Río, J. (2021). *Los modelos pedagógicos en educación física: qué, cómo, por qué y para qué*. Universidad de León.
- Rocher, M., Silva, B., Cruz, G., Bentes, R., Lloret, J., & Inglés, E. (2020). Benefits of outdoor sports in blue spaces. the case of School Nautical Activities in Viana do Castelo. *International Journal of Environmental Research and Public Health*, 17(22), 8470. <https://doi.org/10.3390/ijerph17228470>
- Rose, J., & Paisley, K. (2012). White privilege in experiential education: A critical reflection. *Leisure Sciences*, 34(2), 136-154. <https://doi.org/10.1080/01490400.2012.652505>
- Schram, B., & Furness, J. (2017). Exploring the utilisation of stand up paddle boarding in Australia. *Sports*, 5(3), 53. <https://doi.org/10.3390/sports5030053>
- Serra, F. T., Placencia, E. V. D., Henrique, J. S., & de Moraes Rodrigues, G. (2020). A board made of plastic bottles: A functional, ecologic and economic alternative for learning stand up paddle boarding. *Facta Universitatis. Series: Physical Education and Sport*, 18(1), 135-144. <https://doi.org/10.22190/FUPES200320012S>
- Williams, A., & Wainwright, N. (2020). Re-thinking adventurous activities in Physical Education: Models-based approaches. *Journal of Adventure Education and Outdoor Learning*, 20(3), 217-229. <https://doi.org/10.1080/14729679.2019.1634599>

5. ANNEXES

Planning Guide

0. First step, what do you want students to know and be able to do?

Examples based on previous works both in the teaching field and in the nautical leisure market on the design and application of the Adventure Education methodology in the natural environment (Pérez-Pueyo, 2021).

1. Big Picture Goal:

Facilitate experiential and meaningful learning for university students, organized around the adventure education model, through the development of technical, social and environmental skills in the autonomous and safe practice of Paddle Sup, promoting healthy nautical leisure, group cooperation and respect for the aquatic environment.

2. Big Picture Assessment:

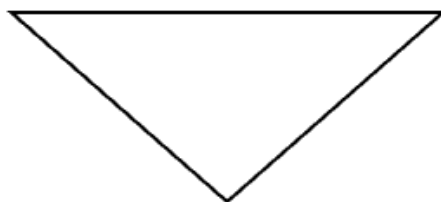
Different evaluation tools will be developed that will guarantee the formative nature of the evaluation of the Adventure Education model. It will start from an initial evaluation with a knowledge test and previous experiences, during the different practice blocks group reflections will be carried out and each student individually will keep a diary at home where they will reflect their metaphorical analogies. To finish with a knowledge test.

3. How do we facilitate student learning to reach goals and successfully complete assessments?

Plan for student learning to achieve learning outcomes:

Learning outcomes

Assessment



Learning Experiences
&
Instructional Strategies

Students learn about	Students should be able to	Learning Experiences	Instructional Strategies	Assessment
Knowledge of the adventure education model in the marine environment.	Implement educational experiences based on the adventure education model.	Paddle Sup tasks, activities and games, structured around the marine adventure education model.	Structuring the initiation to Paddle Sup from facilitated dry situations to adventure games in real situations.	Group reflection at the end of the activity blocks and at the end of each session. Individual session diary. Initial and final assessment of knowledge and change in perception.
Cooperative work to resolve unforeseen challenges.	Recognize your limitations and those of your companions in the natural environment.	Paddle Sup tasks, activities and games, structured around the marine adventure education model.	Perceive in all tasks the capabilities necessary for their execution.	Feedback provided individually and group and individual reflections
Analog reflections.	Extrapolate the experiences and situations experienced in the sessions to daily life.	Paddle Sup activities, tasks and games, structured around the marine adventure education model.	Facilitate group and individual reflection on the experiences of the activities.	Group reflection at the end of the activity blocks and at the end of each session. Individual session diary.

Daily Season Plan:

Lesson	Plan	Assessment
Day 1	During this session, activities will be carried out to understand oneself and the possibilities of others as a work group. As well as activities to learn about the material and specific installations. To develop content such as presentation of Padell Sup (Dry), Losing fear of water and board: Balance games, Lying down manual rowing – knees and basic rowing/chest safety position.	As an initial evaluation, we have chosen two tools aimed at knowing the students' prior knowledge about Paddle Sup and the marine environment, as well as their self-concept about performance in the marine environment. To end the session with a group reflection on the experiences and analogies with daily life
Day 2	This session will be characterized by more technical and analytical work using the shovel. The different ways of paddling, gripping the paddle and positions on the board, both standing and kneeling, will be explained. Progress will be made in terms of more and less calm waters and in terms of greater and lesser depth. The challenge component will always be present in the explanation of the activities structured around modification of the real situation, with small modifications of the real situation and analytical practices in a real situation.	In the reflection of this session, we will emphasize those students who found it more difficult to complete the route and why.
Day 3	The activities of this session will aim to present the student with challenges and resolution of more or less unexpected problems, to advance towards autonomy in the student's navigation, through the development of the Gymkhana: "The Journey to the Hidden Island"	The reflection activities will be aimed at raising awareness of aspects such as the appearance and resolution of unexpected problems, the perception of autonomy and freedom in the marine environment, and collaboration between colleagues. In addition to the diary that the student will carry out individually at the end of each of the sessions, an objective test on knowledge of Paddle Sup and the marine environment already provided at the beginning of the sessions will be incorporated, as well as a student perception questionnaire in relation to the impact that the course has had on their self-concept, interpersonal skills and motivations

- PART 3 -

ATTITUDINAL STYLE

ENCARNACIÓN RUIZ LARA
Catholic University of Murcia, Spain

MARÍA T. MORALES-BELANDO
Catholic University of Murcia, Spain

1. INTRODUCTION

The Attitudinal Style emerges with the aim of working towards the holistic development of students, now with a competency-based approach, seeking to foster their motivation and enjoyment of PE classes by building on their prior experiences and needs. It emphasises providing positive, inclusive experiences that encourage the development of habits for engaging in autonomous physical activity, both within the classroom and during their free time.

2. THEORY, STRUCTURE, CORE ELEMENTS AND BENEFITS

2.1. Conceptualization

The essential characteristic of the Attitudinal Style, which sets it apart from the traditional teaching approach, lies in the order in which concepts, procedures, and attitudes are introduced to students. In this case, instead of starting by teaching concepts so that attitudes emerge through procedures ($C > P > A$), the focus is on first fostering attitudes which, through specific procedures, enable the desired concepts to be reached, giving them real meaning for the students ($A > P > C$) (Pérez-Pueyo et al., 2021, p. 150).

2.2. BASIC ELEMENTS

To achieve the intended purpose of this pedagogical model, three key elements are used:

1. Intentional body activities,
2. Sequential organization toward attitudes (Pérez-Pueyo, 2007) and
3. Final assemblies (Pérez-Pueyo, 2005, 2007, 2010a; Pérez-Pueyo et al., 2021).

Expanding on these elements, it is important to note that:

1. Intentional body activities are characterised by:

Their aim is the full development of the student's personality through

the five capacities that shape it (cognitive, motor, personal balance, interpersonal relationship, and social integration). In this approach, motor (physical) activity becomes the means for achieving the student's holistic development.

The activity seeks to move away from mechanical or repetitive exercises that lack meaning for the students. Instead, it should provide them with pleasure and satisfaction derived from their achievements. Students are expected to engage actively, identify their roles, and take initiative. However, effort and responsibility are pivotal to attaining both individual and collective accomplishments. Repetition, in this context, becomes meaningful only when students perceive it as necessary to achieve their objectives or derive enjoyment from the process.

The activities help students recognise their limits and work towards overcoming them, both individually and collectively.

The activity fosters interaction with others, a fundamental aspect for achieving meaningful learning. It enables students to compare perceptions and sensations, exchange information, modify prior concepts or frameworks, and reflect. It also enhances and develops relationships among peers as they engage in dialogue, debate, and collaboration to design and execute the "final assemblies."

The activities are linked to processes of self-assessment and peer assessment, which help students get to know themselves and others, valuing each individual's characteristics and contributions to the final work.

The intentional body activities are a means through which autonomy can be achieved, either by seeking help from others or by collaborating to help others attain it (Pérez-Pueyo, 2010a).

2. In the sequential organization toward attitudes, the students usually begin working in pairs, organized by affinity and without the teacher's imposition, with the intention of ensuring they have positive experiences that enhance their self-esteem through the intentional body activities. From that point on, the pairs join together in groups of four, then eight, and so on, until the entire class is gathered together (Pérez-Pueyo, 2016) (Table 6).

TABLE 6. Sequential organisation towards attitudes.

2	---	4	---	8	---	16	---	All the group
(2+2)		(4+4)		(8+8)				

When preparing the final projects, if there are students who are experts in a particular topic related to the unit (e.g., football, dance, etc.), an initial condition is set: the students are asked to separate the experts into as many groups as the teacher deems appropriate, while still maintaining affinity and freedom in the grouping process, ensuring no one is excluded.

The most notable aspect of this organisational system is that all students are working at the same time, which prevents the others' gaze from affecting the positive experience. Furthermore, the teacher can assist anyone who needs help without the other students being aware of it, as they are fully engaged in solving the problem or challenge at intentional body activities. However, the greatest value lies in the fact that initial help is generated within the pair (or sometimes a trio), which makes the process more participatory and inclusive.

3. Final assemblies (Pérez-Pueyo, 2005, 2007, 2010a).

These are projects that demonstrate both the process and individual and group improvement at the end of the teaching unit (Pérez-Pueyo, 2010b). Their purpose is to engage all students in a project that shows the possibility of cooperating towards a common goal, learning to value each student according to their real capabilities, learning to reach agreements to achieve it, and ensuring that no discrimination occurs based on race, gender, intellectual ability, or motor skill level. In this regard, the projects are of various types: shadow theatre performances, ecological gymkhanas made exclusively with recycled or reused materials, large games events, circus performances, parades, storytelling, or projects involving the preparation of game situations for team sports work (Pérez-Pueyo, 2016).

2.3. DIFFERENTIATION BETWEEN ATTITUDINAL STYLE AND COOPERATIVE LEARNING

Although the cooperative and collaborative nature of the Attitudinal Style (Pérez-Pueyo, 2016) is evident, and it meets many key elements of Cooperative Learning (Velázquez, 2013), the differences between the two models are clear. Below are three key differences:

1. Although work in the Attitudinal Style begins in pairs, trios, or quartets, the intention is to continue working together until the entire class is involved; whereas, in Cooperative Learning, groups remain stable, and the goal is not usually to have the entire class work together in a coordinated way. The situation would be different in the case of cooperative projects.

2. In the Attitudinal Style, although the initial groups are small (similar to Cooperative Learning), they are never organized by the teacher, nor is heterogeneity in terms of any specific ability required. However, in Cooperative Learning, groups are generally organized by the teacher, initially with four people, based on their intellectual or motor heterogeneity, and complementarity is established with socially active peers.

3. In Cooperative Learning, the teacher initially takes on a facilitator role, without conducting lectures or directed sessions, encouraging peers from the very beginning to explain, teach, and help each other. However, in the Attitudinal Style, during the first phase of the units, the teacher always directs the work to achieve the individual motor goal of each student, fostering interpersonal relationships and social integration, while boosting self-esteem. Additionally, everything is aimed at group work and the final achievement of the entire class.

3. PRACTICAL RESOURCES ABOUT HOW TO APPLY AND ADAPT PEDAGOGICAL MODELS

The learning situation or teaching unit will be organized into three phases (Table 7):

TABLE 7. Organization of the Teaching Unit into three phases.

Phase 1	Phase 2	Phase 3
Acquisition of Positive Experiences in collaboration with peers, and working towards generating them as a whole class group whenever possible.	Preparation of the final assembly and application of intergroup peer assessment processes with the aim of collective improvement. Completion of the final assembly and other final activities for the evaluation and grading of the unit.	Preparation/Final Rehearsals of the final assembly and application of intergroup peer assessment processes aimed at collective improvement. Execution of the final assembly and other final activities for the evaluation and grading of the unit.

Source: Pérez-Pueyo et al. (2021, p. 154).

3.1. Phase 1

An initial set of sessions in which, following an initial assessment, the intentional body activities aim to generate positive experiences for all students without exception. These experiences help foster self-awareness and understanding of others, with the goal of achieving autonomy, both from the individual and group perspective.

This phase moves away from technical progressions based solely on motor skills, instead focusing on a sequence of activities. This sequence is understood as "the appropriate selection of activities, approached from a holistic perspective to develop the individual's capacities based on their positive attitude, through the pursuit of learning and competence at both individual and group levels" (Pérez-Pueyo, 2005, p. 210).

The intentional body activities help students recognise their limits and work to overcome them; where the development of physical capacities and motor skills, through experimentation, effort, and perseverance, enables them to achieve the challenges they set for themselves, both individually and collectively.

3.2. Phase 2

A second phase follows, consisting of a set of sessions where students, organised into groups (the number of which varies depending on the teaching unit and the time they have been working under the

Attitudinal Style), must prepare their final assembly. To accomplish this, the groups must use the knowledge and skills acquired as the fundamental tools for their work.

At the beginning of this second phase, students must have a clear understanding of what is required for the final evaluation and grading, by familiarising themselves with the evaluation instruments.

3.3. Phase 3

Immersed in the final phase of the unit, the evaluation instruments will be applied from a triple perspective: group self-assessment, intergroup peer assessment, and hetero-assessment. The primary goal is to ensure that this triadic evaluation process (Pérez-Pueyo, 2016) provides students with a shared, consensual, and/or justified final opinion, comparing their assessments with those of their peers and the teacher before final grading.

Additionally, within the groups, an intra-group peer assessment process must take place through the intra-group progress journal. Its main function is to allow for the reorientation of work and/or behaviours of group members during the preparation period.

The Attitudinal Style contributes to the teaching-learning processes in Physical Education by demonstrating:

- a. The real possibility of generating positive experiences for all students, without exception and from an inclusive perspective;
- b. That understanding the "why" and "for what purpose" behind teaching, in coordination with the context and specific content where learning is intended to occur, is essential;
- c. That starting from individual achievement and satisfaction and linking it with collaborative and/or cooperative work is necessary to achieve group success, involving the entire class;

- d. That in educational contexts with initial group heterogeneity, the appropriate choice of activity sequences related to content, context, and students allows for successful experiences that purely technical progressions cannot achieve;
- e. That planning work focused on transferring learning to other contexts leads to greater student engagement in their learning, particularly of a competency-based nature; and
- f. That formative evaluation is an essential element of the learning process, as it engages students through the regular use of clear, objective, and appropriate instruments, fostering collective learning (Pérez-Pueyo et al., 2021, p. 172).

4. REFERENCES

- Pérez-Pueyo, A. (2005). *Estudio del planteamiento actitudinal del área de Educación Física de la Educación Secundaria Obligatoria en la LOGSE: Una propuesta didáctica centrada en una metodología basada en actitudes*. Universidad de León.
- Pérez-Pueyo, A. (2007). La organización secuencial hacia las actitudes: una experiencia sobre la intencionalidad de las decisiones del profesorado de educación física. *Tándem. Didáctica de la Educación Física*, 25, 81-92.
- Pérez-Pueyo, A. (2010a). *El Estilo Actitudinal. Propuesta metodológica para desarrollar unidades didácticas en educación física*. Editorial CEP S.L.
- Pérez-Pueyo, A. (2010b). Fiestas, escenarios y espectáculos en la calle: la satisfacción de conseguir que los demás disfruten. *Tándem. Didáctica de la Educación Física*, 32, 25-35.
- Pérez-Pueyo, A. (2016). El Estilo Actitudinal en Educación Física: Evolución en los últimos 20 años. *Retos. Nuevas tendencias en Educación Física, Deportes y Recreación*, 29, 207-215. <https://doi.org/10.47197/retos.v0i29.38720>
- Pérez-Pueyo, Á., Hortigüela Alcálá, D., & Fernández-Río, J. (2021). *Modelos pedagógicos en Educación Física: Qué, cómo, por qué y para qué*. Universidad de León: Servicio de Publicaciones.

Pérez-Pueyo, Á., Hortigüela-Alcalá, D., Gutiérrez-García, C., & Fernández-Río (2021). *Rúbrica para actividades cooperativas*.

https://drive.google.com/file/d/1og2F7ZP-N1pq3dylsu_m-RA4Q9rd5CvU/view

Velázquez, C. (2013). *Análisis de la implementación del aprendizaje cooperativo durante la escolarización obligatoria en el área de Educación Física* [Doctoral Thesis]. Universidad de Valladolid.

<http://uvadoc.uva.es/handle/10324/2823>

5. ANNEXES

Planning Guide

0. Big Picture Goal:

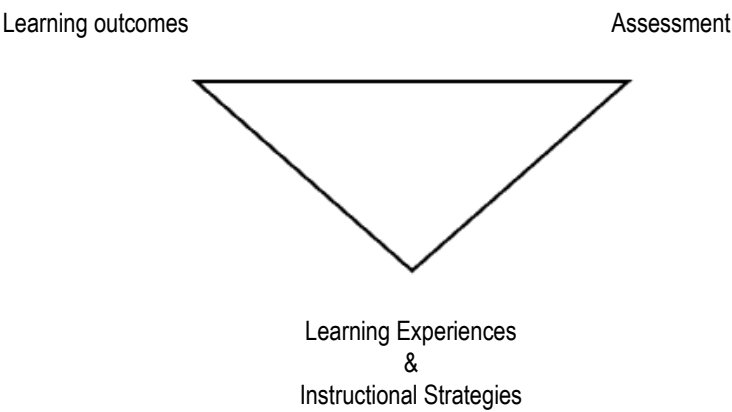
The general objective is to promote responsibility, self-improvement, creativity, and teamwork in order to enjoy a coordination-based activity through juggling.

1. Big Picture Assessment:

A formative evaluation will be conducted, based on a triadic assessment: individual self-assessment (initially) and intra-group self-assessment, intra-group peer assessment, and hetero-assessment (by the teacher). This approach aims to raise awareness of progress and areas for improvement, enabling the reorientation of individual behaviours and collective work if necessary.

2. How do we facilitate student learning to reach goals and successfully complete assessments?

Plan for student learning to achieve learning outcomes



Students learn about	Students should be able to	Learning Experiences	Instructional Strategies	Assessment
Responsibility, self-improvement, and enjoyment.	Actively participate in tasks, be self-critical, give your best, enjoy the process without setting barriers, and help others to grow.	Experiment through juggling, being attentive to your own attitudes and emotions, as well as those of others.	Experiment individually and in groups with simultaneous work, to avoid comparisons based on skill level that could block enjoyment. Provide a reference of skill levels in juggling*, so each student can set challenges of varying complexity, without the need for everyone to achieve the same. Encourage collective challenges to promote individual responsibility towards achieving the common goal.	Responsibility, self-improvement, and enjoyment.
Developing creativity	Design and showcase original group final assemblies based on coordination through juggling.	Combine experimentation, personal learning, and the learning of others to design the final performances.	Encourage students' creativity through tasks involving individual and group experimentation with different materials, offering freedom in all phases of the unit, without providing sequences to imitate.	Developing creativity
Developing coordination	Perform juggling by coordinating throws and catches with both hands individually, using different types of materials	A variety of activities will be proposed in each session, where students can experiment with juggling individually,	Proposed tasks based on eye-hand coordination through juggling.	Developing coordination

	and with a variety of partners.	using different materials, and with an increasing number of partners.		
Developing teamwork	Experiment and design a group assembly, contributing throughout the process and during the presentation.	Through the proposal of progressively larger groups in which students can support each other and achieve both individual and collective growth.	It encourages help, shared experimentation, contributions to the final assemblies, and the acceptance of others' proposals, in order to create a performance that allows everyone to showcase what they have learned and enjoy the process.	Developing teamwork.

Daily Season Plan:

Lesson	Plan	Assessment
Day 1	Introduction to the objectives of the unit "We Enjoy the Circus," based on the Attitudinal Style. Formation of pairs by students based on affinity, although the work involves individual experimentation with self-made balls, tennis balls, balls of various sizes, hoops, and clubs. Encouragement of communication among the members of each pair to share experiences, offer help, provide encouragement, etc., making it clear that everyone can enjoy the activity, regardless of their skill level. Group reflection.	Initial evaluation of the class group's situation in relation to juggling: homogeneity and heterogeneity in terms of their knowledge, technical skill/ability, interest, creativity, etc.
Day 2	Introduction to the session Work in pairs: With self-made balls With tennis balls (including direct throws and catches, bounces, wall interventions, etc.) Creative activity using a single material, combining materials and possibilities.	Individual self-assessment and intra-group assessment and Group reflection.
Day 3	Introduction to the session Work in pairs: With large balls With hoops With clubs Creative activity using a single material, combining materials and possibilities.	Individual self-assessment and intra-group assessment and Group reflection.

Day 4	Introduction to the session Work in groups of 4: Creative activity where everyone experiments with a single material (direct throws and catches, bounces, vertical throws and spins, throws and group movements to the left or right, etc.), combining individual activities, pair work, and group work while introducing different materials.	Individual self-assessment and intra-group assessment and Group reflection.
Day 5	Introduction to the session Work in groups of 8: Same as the previous activity, but with 8 people.	Individual self-assessment and intra-group assessment and Group reflection.
Day 6	Introduction to the session Work in 2 groups of 16: Same as the previous activity, but with 16 people.	Individual self-assessment and intra-group assessment and Group reflection.
Day 7	Introduction to the session Preparation of the final performances (groups of 8 people) – duration agreed upon with the students (between 3 and 5 minutes). Each group selects their musical base and characterization (such as makeup or accessories). Group reflection.	Intra-group co-evaluation through the intra-group reflection diary.
Day 8	Introduction to the session Rehearsal of the final performances (groups of 8 people). Group reflection.	Individual self-assessment, intra-group co-evaluation through the intra-group reflection diary.
Day 9	Introduction to the session Performance/recording of the final assemblies.	Individual self-assessment, intra-group co-evaluation through the intra-group reflection diary.
Day 10	Viewing of the final assemblies' recordings and group reflection on the unit.	Inter-group co-evaluation. Final evaluation of the unit.

* Base template provided by the teacher as a reference for the difficulty of the possible juggling elements to be worked on in class.

Difficulty	Balls	Balls of different sizes	Small hoops	Large hoops	Clubs (all are high difficulty)	Group challenge (choice of equipment)
High (8.5-10)	Combination of material from 'eight' or 'eight in pairs'. Creative elements not explained in class (juggling with music rhythm or any other idea). Depending on the material, it will have one note or another, not all materials are equally easy.					
	Eight in pairs face to face with change (5 balls)	Juggling with 2 balls in one hand	Eight individual (rubber or plastic rings)	Eight individual	Eight or normal cascade (3 mal-lets)	Circle with vertical throw and right/left turn (more than 5 persons)
	Steal the eight and continue it	Eight in pairs side by side (Siamese twins)			Lance-change-pick-up (2 clubs / student)	Row with vertical throw back (more than 5 persons)
	Juggling with 2 balls in one hand	Eight or normal cascade (3 balls)			Lance-change-pick-up (1 club / student)	2 to 2 pitching with change of hand (from 8 persons)
	Take eight with ball thrown by teammate (3 balls) or steal	Eight in pairs facing each other (3 balls)			Lance-change-pick-up (2 clubs / student)	
Medium (6.5-8.5)	Eight or normal cascade (3 balls)	Throwing-change-pick-up (2 balls / student)	Eight in pairs facing each other (3 rubber or plastic hoops)	Eight in pairs facing each other (3 rubber or plastic hoops)		Circle with vertical throw and right/left turn (less than 5 persons)
	Eight in pairs facing each					Row with vertical throw back (less than

	other (3 balls)					5 persons)
	Eight in pairs (dance) (3 balls)					2-on-2 pitching with change of hand (up to 8 persons)
	'Dance' pairs (3 balls) advancing laterally					
	Eight in pairs side by side (Siamese twins)					
Low (5-6.5)	Throw-change-pick-up (2 balls / student)	Throw-change-pick-up (2 balls / student)	Throw-change-pick-up (2 hoops / student)			
	Throw-change-pick-up (1 ball / student)	Throw-change-pick-up (1 ball / student)	Throw-change-pick-up (1 hoop / student)			

Source: Herrán Álvarez et al. (2022, p. 75). Herrán Álvarez, I., Pérez Pueyo, Á., Heras Bernardino, C., & Hortigüela Alcalá, D. (2022). Malabares a través de la autorregulación, el uso del teléfono móvil y la evidencia de aprendizaje. *Tándem: Didáctica de la Educación Física*, 75, 74-78.

- PART 4 -

SELF-CONSTRUCTION OF MATERIALS

LOURDES MEROÑO

Catholic University of Murcia, Spain

ENCARNACIÓN RUIZ LARA

Catholic University of Murcia, Spain

MARÍA T. MORALES-BELANDO

Catholic University of Murcia, Spain

FRANCISCO JOSÉ CÁNOVAS ÁLVAREZ

Catholic University of Murcia, Spain

1. INTRODUCTION

Sport Pedagogy is constantly evolving with the aim of exploring and analysing pedagogical models that facilitate the integral development of students through the subject of PE (Arias-Estero et al., 2020), being increasingly necessary transformative pedagogies that allow responding to the real needs of the educational context (Meroño et al., 2023). One of the emerging pedagogical models in this discipline is the Self-Construction of Materials (Fernández-Río et al., 2016). This model is characterized by the involvement of students in the process of recycling and transformation of materials, both industrial and domestic (e.g., cardboard, plastic bags or newspaper), to create didactic resources to be used for the development and learning of PE contents (Méndez-Giménez, 2023). According to Fernández-Río and Méndez-Giménez (2014), this model arises for four main reasons: the scarcity of resources in the area, limited budgets for the acquisition of materials, the need for materials that meet the specific needs of each student, and the desire to foster an ecological awareness among students.

In this model, students are the protagonists of their own learning, actively participating in the selection, design, construction, and adaptation of materials that respond to their educational needs. In this way, students develop their creativity, critical thinking, and ability to work in teams, in addition to acquiring ecological awareness by working with recyclable or reusable materials. Therefore, according to Méndez-Giménez (2023), this model understands that the design and creation of materials is based on three dimensions of constructivist theory: the active learner, who learns through practical experience; the social learner, who constructs knowledge through interaction with others; and the creative learner, who is involved in the design and innovation process.

The self-construction of materials, based on the creation of didactic resources, is considered to be an effective pedagogical model to increase student participation and learning during PE lessons. Involving students in the creation of their own materials and in the transformation of the resources, which they will then use in their games and activities, offers significant benefits in several dimensions: personal (e.g., self-esteem),

motivational (e.g., intrinsic motivation), attitudinal (e.g. respect for the material) and social (e.g., learning to share and respect rules). Likewise, this model promotes values such as recycling and respect for the environment, and for one's own and others' property (Méndez-Giménez, 2014). Recent research also evidences the benefits that this model brings both to students' learning and to several psychological variables, such as interest, fun, enthusiasm, and/or perception of basic psychological needs, among others. Furthermore, according to the authors Baena-Morales et al. (2021), this model contributes to the development of Sustainable Development Goals (SDGs), being a challenge for the current educational system.

2. THEORY, STRUCTURE, CORE ELEMENTS, AND BENEFITS

The following are key components that, according to the literature, characterize the self-construction of materials (Méndez-Giménez, 2014):

2.1. Constructionist Approach

Orientation that contemplates the teaching and learning process from a learning by doing perspective, through the creation of artifacts for their subsequent application:

1. Artifacts that favour the acquisition of new knowledge.
2. Holistic learning: this approach focuses on the elaboration of materials and can stimulate the integral development of students, promoting the development of physical, affective, cognitive, artistic, and social dimensions within the same project (Méndez-Giménez, 2018). That is, it allows the development of individual and social skills since the elaboration of these artifacts can be done as a group challenge in small groups or individually (Méndez-Giménez, 2021).
3. Functionality: The use of self-built materials arises as a solution to the lack of resources in Physical Education classes and is presented as an economical and efficient alternative, especially in times of economic crisis, due to its low or no cost. For this reason, teachers and administrators are recommended to

adopt this strategy to promote physical activity among children (Méndez-Giménez et al., 2017). In addition, it allows re-using and giving utility to implements and materials that, if not for this option, would be discarded, facilitating access to resources that would otherwise be unavailable. These materials also make it possible to meet the established motor objectives.

4. Active involvement: The design of materials adapted to the evolutionary development of students and their manipulative skills favours their involvement, generates expectations of exploration, stimulates proactive attitudes, and facilitates enjoyment during these activities (Méndez-Giménez, 2018). In this context, the involvement of students in the search for the raw material increases their interest in using these resources, can bring cognitive benefits, and foster a positive attitude towards respect for the materials.
5. Autonomy: The purpose of the use of this material is to increase the time dedicated to the practice of moderate and vigorous physical activity both during school and extracurricular hours, as well as to maximize the time of motor activity during Physical Education classes (Méndez-Giménez, 2018).
6. Education in values: The self-construction of material promotes the development of values and attitudes related to recycling, favours ecological awareness for the maintenance of the environment, promotes education on consumption, inclusion, and coeducation, and allows the reuse of used materials. In this sense and with these materials, it is not necessary to make use of conventional materials with trademarks to practice physical activity (Méndez-Giménez, 2021).

2.1.1. Advantages

Self-construction of material is a model that presents multiple advantages. Some of them are mentioned below. First, the design and application of self-constructed materials can be adapted to their own physical and maturity development. Aspects such as the size and weight of the mobiles

and implements allow them to be adjusted to the characteristics of the students. This is an advantage since commercial equipment is not always of an adaptable nature; the size, shape, weight, and other standard features make the implements useful only for certain subjects. However, self-built equipment can be specifically adapted to meet educational needs. In this sense, previous studies have shown that this adjustment can have a positive impact on the students' perception of competence, motivation, and enjoyment (Méndez-Giménez et al., 2017).

Second, the promotion of students' creativity by creating an ideal framework for its development. It is considered important to highlight the wide range of possibilities that this methodology offers, as well as the importance of creating personalized materials, according to the students' tastes. For this reason, it is recommended that the construction task not be completely closed. An orientative base is advisable, especially for novice students, giving them the opportunity to make decisions regarding the type of material (giving concrete options), the shape, or the colours of the artifact.

Third, the support of digital support materials. This methodology enables the integration of new technologies in the classroom by being able to rely on video tutorials as tools to facilitate the teaching-learning process and explain step by step the construction of these artifacts. Through the use of digital support tools, the aim is for students to develop satisfactory experiences with their use, acquiring knowledge based on the constructivist theory previously described, promoting their creativity and proactive involvement in the task, stimulating meaningful learning, cooperative work, and facilitating the work of teachers during Physical Education classes (Méndez-Giménez, 2018).

Fourth, the integration of the self-constructed material in the educational curriculum of the subject Physical Education (Royal Decree 217/2022), being in the second block of basic knowledge, "Organization and management of physical activity", and in the sixth block of basic knowledge, "Efficient and sustainable interaction with the environment". Therefore, the benefits offered by this pedagogical model are increasingly evident in the approach of the teaching program and the corresponding design of the didactic units.

Fifth, this model favours interpersonal relationships between teachers, families and students. Previous research has shown that the creation of these artifacts, and even their subsequent use, encourages teamwork, decision-making when choosing materials, strengthens social ties, and facilitates active and creative learning among all those involved (Barrenetxea-García et al., 2024).

Sixth, the possibilities that this model offers to be hybridized with any of the current or emerging pedagogical models (Méndez-Giménez, 2011, 2014). For example, heterogeneous and stable team's characteristic of cooperative learning can be used in the first phases of the unit as a strategy to make the materials, and also to evaluate their functionality or develop new activities (Fernández-Río & Méndez-Giménez, 2012). Also, this model can be hybridized with the emerging game invention model. This hybridization favours the creative process when students discover new games with self-constructed materials and especially when these materials are unknown (Fernández-Bustos et al., 2018; Méndez-Giménez, 2021). Thus, this hybridization from the constructivist perspective is considered to be an inexhaustible source of objects with which to think about games and facilitates the design of unexplored, authentic, creative and unique games (Méndez-Giménez, 2023).

2.1.2. Disadvantages

This model also has disadvantages, some of which are presented below. First, the requirement for risk control. Self-built materials, unlike conventional ones, have not received prior safety control, so it is essential that the teacher adopts rigorous safety measures throughout the construction process and its subsequent application (Méndez-Giménez & Fernández-Río, 2012).

Second, awareness of the handling of the tools to be used for the construction of the materials. Materials considered dangerous for the students should be especially identified according to variables inherent to the context, such as age, or by characteristics of the materials themselves, such as sharp edges, sharp corners, metal and/or wood reinforcements, and parts that can become detached (Fernández-Río et al., 2018). The development of robust and consistent materials is necessary to minimize these risks.

Third, the investment of time for the construction of materials. The self-construction of materials entails an additional burden of time during Physical Education classes, being aware of the time for the development of motor competence as a priority objective. The elaboration of these materials can be done during the classes of other subjects to encourage interdisciplinary project work, address content related to recycling, environment, creativity, geometry, among others. Another option is to do it after school hours to facilitate interpersonal relationships with friends and family (Navarro Ardoy et al., 2020).

Fourth, the need for spaces to store the self-built material. The materials constructed by the students require additional spaces to store them, and it is essential that these materials are easy to move. Given this problem, the possibility of storing the generated material at home and bringing it to class in the sessions that require it is proposed, this alternative being considered significant to promote the practice of activity after school hours (Fernández-Río et al., 2018).

Fifth, the high workload for the teacher. The construction of materials involves additional work for the teacher until he/she presents a battery of reserve materials. It is recommended that this process be elaborated by the student himself and that the teacher construct some of these resources when it is essential to teach or lend to the students (Fernández-Río et al., 2018).

3. PRACTICAL RESOURCES ABOUT HOW TO APPLY AND ADAPT PEDAGOGICAL MODELS

If there is one thing that characterizes the self-constructed material model, it is its eminently practical component. This section of the document presents the phases, characteristics, and evaluation of the self-constructed material as a pedagogical model for PE.

3.1. Phases for material Self-Construction

The phases for the implementation of material self-construction are as follows (Méndez-Giménez, 2021):

1. Planning: In this phase, it is crucial that the teacher makes key decisions from the beginning, as this will guide the students in the creation of the materials. In addition, it should be defined whether the development of the materials will be carried out during school hours or after school hours, or whether it will be necessary to implement interdisciplinary projects with other subjects. It is also essential to determine what type of information, links, videos, and channels will be provided for students to acquire the necessary knowledge. Evaluation and grading criteria should be established in advance and be clear to all. The materials selected should align with the physical-motor objectives, consider the economic costs involved, and take into account the manipulative skills students will develop. Finally, if the material is difficult to obtain or uncommon, the teacher should provide alternatives or supply it directly.

2. Elaboration of the material: The phase focused on the construction of the corresponding resource, and the information of the teacher or family member may be essential for the elaboration of the same. Thus, this process can be carried out in:

- a. Session: To ensure the quality of the materials and their proper direction by the teacher, many teachers dedicate one or two physical education class sessions to their development. This option allows the implementation of strategies for the construction and evaluation of the material based on cooperative learning, since previous studies have shown that the self-construction of materials facilitates the development of the fundamental principles of this educational approach (Fernández-Río & Méndez-Giménez, 2012).
- b. Sessions dedicated to the construction of materials should begin with a detailed explanation by the teacher, accompanied by clear examples of what is expected to be achieved. This first phase should be carried out in the group's classroom to promote quality learning. During the guided process, the teacher can assist students who have difficulties. Upon completion of the construction of the material, the teacher must review its quality and safety

to ensure that it is suitable for use. Subsequently, the session will move to the sports hall, where the students must collect and dispose of the remains in the appropriate containers. Upon arrival at the hall, if a large number of materials are transported, it will be necessary to organize the space appropriately to ensure the safety of the students. In addition, if not all the materials are required for the activity, they must be placed in an area that does not interfere with the sports practice. It is essential to have shelves or spaces designated for each type of material, since several groups may use the same self-built material during different teaching units.

- c. Homework: This option allows more time to be devoted to physical and sports practice. To do this, the teacher must provide in advance the information on the materials needed for the unit, as well as the essential instructions for its preparation, or use explanatory video tutorials.
- d. Interdisciplinary projects: This process allows for the development of interdisciplinary projects with other subjects in the curriculum, which enriches the teaching-learning process. A previous study has shown the impact of incorporating self-constructed materials in the subjects of Art Education, Citizenship Education, Mathematics, Knowledge of the Natural, Social and Cultural Environment, and Language and Literature (Méndez-Giménez, 2010).

3. Verification: Regardless of where the activity is carried out, it is essential to review all the resources created by the students and provide constant feedback throughout the process, indicating what can and cannot be done with these materials. In addition, once finished, the teacher must verify that the materials meet the appropriate size, shape, composition, and weight requirements for the students. It is the teacher's responsibility to ensure the safety and physical well-being of the students, since it is he or she who introduces these new resources into the classroom.

1. Maintenance: Materials made by the students themselves, being created in an undetermined time, may require adjustments or modifications in some of their parts. To address this situation, it will be necessary to have a kit of spare materials at the centre. In addition, depending on the type of material manufactured, it will only be necessary to replace those components that need it and that are no longer in optimal condition for use.

3.2. Characteristics that Self-Built Materials must Include

Self-built materials must meet certain basic requirements that must be considered during the planning, teaching and evaluation process. These include: safety, functionality, ease of handling, aesthetics, durability, ease of transport and storage, and profitability.

1. Safety.
2. Utility and functionality.
3. Durability.
4. Handling and adapting to the characteristics of the students.
5. Aesthetics.
6. Easy transport and storage.
7. Cost-effectiveness.

3.3. Assessment Process

For the integration of these artefacts, it is essential to carry out a formative evaluation, either individually or as a group, of the students on the materials they have built, either on their own or in collaboration with their classmates. This evaluation must assess the characteristics of the materials, analyse the degree of involvement during the unit (if it has been shared), and verify that the safety criteria are met and that the material is suitable for use (Méndez-Giménez, 2021). The objective of this process is to raise awareness among students about the effort and time involved in the design of these materials, as well as to raise awareness about the importance of creating safe, resistant, and attractive artefacts. In addition, this process allows students to be involved in self-assessment and co-assessment activities of the self-built materials.

4. REFERENCES

- Arias-Estero, J. L., Meroño, L., & Calderón, A. (2020). *Fundamentos pedagógicos de la enseñanza del deporte*. La Muralla, S. A.
- Baena-Morales, S., Jerez-Mayorga, D., Delgado-Floody P, & Martínez-Martínez, J. (2021). Sustainable development goals and physical education. A proposal for practice-based models. *International Journal of Environmental Research and Public Health*, 18(4), 2129. <https://doi.org/10.3390/ijerph18042129>
- Barrenetxea-García, J., Ortuondo Bárcena, J., & Méndez-Giménez, A. (2024). Recreos activos con material autoconstruido: Una mirada desde la perspectiva parental y docente. *Retos. Nuevas Tendencias en Educación Física, Deportes y Recreación*, 54, 736-745. <https://doi.org/10.47197/retos.v54.103550>
- Fernández-Bustos, J. G., Méndez-Giménez, A., & Sánchez-Gómez, R. (2018). *Didáctica de la educación física para bachillerato basada en modelos*. Síntesis.
- Fernández-Río, J., Calderón, A., Hortigüela-Alcalá, D., Pérez-Pueyo, A., & Aznar Cebamano, M. (2016). Pedagogical models in physical education: Theoretical and practical considerations for teachers. *Revista Española de Educación Física y Deportes*, 413, 55-75.
- Fernández-Río, J., Hortigüela Alcalá, D., & Pérez-Pueyo, Á. (2018). Revisando los modelos pedagógicos en educación física. Ideas clave para incorporarlos al aula. *Revista Española de Educación Física y Deportes*, 423, 57-80. <https://doi.org/10.55166/reefd.vi423.695>
- Fernández-Río, J., & Méndez-Giménez, A. (2012). Innovative practices through the use of self-made materials. The cooperative learning model in Spain. In B. Dyson & A. Casey (Eds.), *Cooperative Learning in Physical Education: A research-based approach* (pp. 42-56). Routledge.
- Fernández-Río, J., & Méndez-Giménez, A. (2014). Self-made materials, Cooperative Learning and games invention: great combination for physical education. *Active + Healthy*, 21(2), 29-32.
- Méndez-Giménez, A. (2010). Inventamos un juego de forma cooperativa. Integrando cooperación y creatividad en la iniciación deportiva con materiales autoconstruidos. In C. Velázquez Callado (Ed.), *El aprendizaje Cooperativo en Educación Física* (pp.119-148). INDE.
- Méndez-Giménez, A. (2014). *Self-made materials in physical education contexts: An innovative complement to instructional models*. 7th Conference on Kinesiology “Fundamental and Applied Kinesiology – Steps Forward” (240-245). University of Zagreb. Faculty of Kinesiology. Croatia.

- Méndez-Giménez, A. (2018). El enfoque basado en autoconstrucción de materiales. El vídeo-tutorial como estrategia de enseñanza para futuros docentes. *Retos. Nuevas Tendencias en Educación Física, Deportes y Recreación*, 34, 311-316. <https://doi.org/10.47197/retos.v0i34.63634>
- Méndez-Giménez, A. (2021). Autoconstrucción de materiales. In Á. L. Pérez Pueyo, D. Hortigüela Alcalá, J. Fernández Río, A. Calderón, L. M. García López, S. González-Villora, D. Manzano-Sánchez, A. Valero Valenzuela, A. Hernando Garijo, R. A. Barba Martín, A. Méndez Giménez, A. Baena Extremera, J. A. Julián, C. Peiró Velert, J. Zaragoza Casterad, A. Aibar Solana, Ó. Chiva Bartoll, G. Flores Aguilar, C. Gutiérrez García, ... M. Sobejano Carrocera (Eds.), *Los Modelos Pedagógicos en Educación Física: Qué, Cómo, Por Qué y Para Qué* (pp. 273-300). Universidad de León, Servicio de Publicaciones.
- Méndez-Giménez, A. (2023). Autoconstrucción de material en educación física: Perfil del profesorado, estrategias y recursos promovidos durante la pandemia. *Retos. Nuevas Tendencias en Educación Física, Deportes y Recreación*, 50, 976-986. <https://doi.org/10.47197/retos.v50.100543>
- Méndez-Giménez, A., Cecchini, J. A., & Fernández-Río, J. (2017). The effect of a self-constructed material on children's physical activity during recess. *Revista de Saúde Pública*, 51(0), 51-58. <https://doi.org/10.1590/s1518-8787.2017051006659>
- Méndez-Giménez, A., & Fernández-Río, J. (2012). El aprendizaje cooperativo en la formación del profesorado: una experiencia basada en autoconstrucción de materiales e invención de juegos. *Revista Española de Educación Física y Deportes*, 400, 55-75. <https://doi.org/10.55166/reefd.v0i400.141>
- Meroño, L., Calderón, A., & Arias-Estero, J. L. (2023). Teachers' professional development needs: A critical analysis of TALIS through structural equation modelling. *European Journal of Teacher Education*, 1-20. <https://doi.org/10.1080/02619768.2023.2296354>
- Navarro Ardoy, D., Collado Martínez, J. Á., & Pellicer Royo, I. (2020). *Modelos pedagógicos en educación física*. Independently published
- Sánchez-Vázquez, A. (2022). *Autoconstrucción de materiales e invención de juegos y su efecto en la conducta de alumnado de Educación Física* [Master's Thesis]. Universidad Católica San Antonio de Murcia.

5. ANNEXES

Planning Guide

0. First step, what do you want students to know and be able to do?

Example based on the unit to design and apply an artefact to achievement of learning based on teaching of alternative sports through self-construction of materials and the invention of games (Sánchez-Vázquez, 2022).

1. Big Picture Goal:

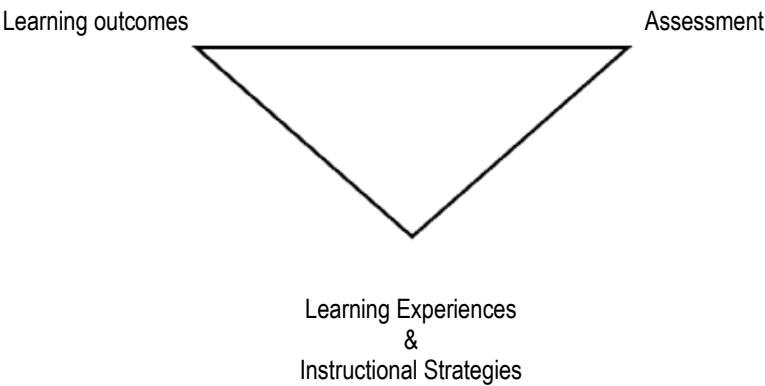
Develop creativity, critical thinking and the ability to work as a team, as well as acquire ecological awareness by working with recyclable or reusable materials for learning Physical Education content.

2. Big Picture Assessment:

To design and apply an artefact to achievement of learning based on teaching of alternative sports through self-construction of materials and the invention of games.

3. How do we facilitate student learning to reach goal and successfully complete assessments?

Plan for student learning to achieve learning outcomes:



Students learn about	Students should be able to	Learning Experiences	Instructional Strategies	Assessment
Commitment and responsibility.	Teacher's explanation or integration of new technologies in the classroom by being able to rely on video tutorials as tools to facilitate the teaching-learning process and follow step by step the construction of the artifact.	See and analyse the video and the materials to design the artefact. Discussion and agreement on materials and phases and who should undertake what. Complete the task sequence to create and design the artefact.	Explanation and/or visualization of video tutorials. Demonstration. Facilitate discussion.	Share the process and self-reflection (video and/or written), on their feelings about their commitment and responsibility during this process.
Developing environmental awareness.	Involvement of students in the process of recycling and transformation of materials.	Awareness on the recycling and transformation of materials. Agreement on materials and how to obtain them. Decision the materials to create and design the artefact.	Facilitate discussion and decision making.	Share the process and self-reflection (video and/or written), on their feelings about their construction, on how materials were decided.
Developing creativity.	Involvement of students in the process of creating the artifact, creating personalized materials, based on the tastes of the students.	Create and design the artefact according to their personal tastes.	Encouraging student creativity.	Share the process and self-reflection (video and/or written), on their feelings about their particular ability to create the artefact.
Being a responsible group member and the use of the artefacts created for the invention of games.	Involvement of students in the process of developing games with the use of the artifact.	Propose games based on the use of self-constructed material.	Facilitate discussion and the decision making with the self-constructed material.	Share the process and self-reflection (video and/or written), on their feelings about their particular ability to create games based on the use of the self-constructed material.

Daily Season Plan:

Lesson	Plan	Assessment
Day 1	- Introduction of the objectives of the unit based on "self-construction of materials" and "invention of games" models. - Explanation and/or visualization of video tutorials as demonstration and class discussion on materials and phases and who should undertake what. - Discuss and self-reflection.	Initial assessment. Share the process and self-reflection (video and/or written), on their feelings about their commitment, responsibility and how materials were decided.
Day 2	- Introduction to the session. - Striking / fielding Games. • Invent cooperative games where the artefact does not fall to the ground. • Invent games where hitting the artefact is the most important thing. - Discuss and self-reflection.	Assessment on the Striking / fielding Games with the artefact self-construction.
Day 3	- Introduction to the session. - Net/Wall Games: • Invent wall-hitting games for individual participation. • Invent wall-hitting games for teams. - Discuss and self-reflection.	Assessment on the Net/Wall Games with the artefact self-construction.
Day 4	- Introduction to the session. - Target Games: • Invent games where the objective is to hit a static target. - Discuss and final reflection.	Assessment on the Target Games with the artefact self-construction.
Day 5	- Introduction to the session - Target Games: • Invent games where the objective is to hit a dynamic target. - Discuss and self-reflection.	Assessment on the Target Games with the artefact self-construction.
Day 6	- Introduction to the session. - Divided court Games: • Invent team games where there is a division by fields. - Discuss and self-reflection.	Assessment on the Divided court Games with the artefact self-construction.
Day 7	- Introduction to the session. - Divided court Games: • Invent team games where there is a division by fields. - Discuss and self-reflection.	Assessment on the Divided court Games with the artefact self-construction.
Day 8	- Introduction to the session - Invasion Games: • Invent team games in the same space where only the upper body is used to hit. - Discuss and self-reflection.	Assessment on the Invasion Games with the artefact self-construction.
Day 9	- Introduction to the session. - Invasion Games: • Invent team games in the same space where only the upper body is used to hit. - Discuss and self-reflection.	Assessment on the Invasion Games with the artefact self-construction.
Day 10	- Discuss and self-reflection about the unit.	Final assessment.

ASSESSMENT: CASE STUDIES AND QUIZZES

1. CASE STUDY 1_COOPERATIVE LEARNING

1.1. Instructions

This case study is carried out in groups of between 3 and 5 students, being advisable to create diverse and heterogeneous groups, taking into account variables such as gender, origin, and previous training, among others.

1.2. Duration

60 minutes.

1.3. Scenario

Mr. Pérez is a PE teacher in an urban school, and in his Secondary PE class (13 - 14 years old) there is a great deal of cultural diversity. Two-thirds of the class are from the country, but one-third come from three different countries. These students who have moved to this country feel that they are not represented in PE, as many of the activities taught are traditional to the country. The teacher proposes a teaching unit on Traditional Games, so that the school welcomes the cultures of the other students and allows them to show and express how their culture can be represented in a PE class; in turn, he aims to create an inclusive environment that fosters cooperation and positive personal relationships, while making PE fun and educational for all.

1.4. Challenges of this Scenario

1. Inclusion: several pupils feel that their cultural roots are excluded in PE sessions, and it is not clear to them that interculturality can be positive.
2. Understanding and valuing traditional games: Most pupils associate P.E. with the work of contents related to sports (orienteering, volleyball, football, basketball, etc.), physical condition and health, and corporal expression, but in many cases without knowing or valuing the contributions of traditional games.
3. Cooperative work: Pupils are not clear about the difference between teamwork, collaborating, and cooperating.

1.5. Task

Design a 4-week unit plan (8 sessions) using the Cooperative Learning model to address these challenges (500 words).

Develop a comprehensive unit plan that describes how the Cooperative Learning model will be applied to effectively address the challenges faced by students in your Physical Education class.

1.6. Answer the Following Questions

1. In what ways can the Cooperative Learning model help the understanding and appreciation of traditional games from the different countries of origin of the students in the class-group?
2. How could Mr. Pérez implement reflective dynamics that allow the students to be aware that cooperating helps their learning? How can the use of an assessment tool (in the framework of formative assessment) help to improve the cooperative learning process in this PE unit?
3. What grouping strategies can Mr. Pérez use to help the inclusion of students and to help them feel that their cultural roots are present in PE?
4. How could pupils' active participation be encouraged? Could the pupils present traditional games from different countries, not the PE teacher, and experience them?
5. With the unit you develop, which of the Sustainable Development Goals do you think you promote?

2. CASE STUDY 2_ATTITUDINAL STYLE

2.1. Instructions

This case study is carried out in groups of between 3 and 5 students, being advisable to create diverse and heterogeneous groups, taking into account variables such as gender, origin and previous training, among others.

2.2. Duration

60 minutes.

2.3. Scenario

Ms. García is a PE teacher in an urban school, and in her Secondary PE class (13 - 14 years old) there is a very diverse student body. One student with a large physical build does not feel very capable of doing certain motor activities in PE. One pupil has a fear of heights. A large number of pupils are very motivated by balance work, acrobatics, rhythm with music, etc. Ms. García proposes an Acrosport teaching unit to promote education in values, as well as motor skills, decision-making and creativity; in turn, to create an inclusive environment that fosters cooperation and positive personal relationships, in which students feel they can participate regardless of their characteristics, while making physical education fun and educational for all.

2.4. Challenges of this Scenario

1. Inclusion: the student body is very diverse, and not everyone feels 'able' to participate, progress and enjoy Physical Education.
2. Disparity of abilities: Pupils show different levels of balance, coordination, agility, but they are creative, or at least demand activities that allow them to foster their creativity.
3. Collaborative work: the teacher believes that cooperation is not incompatible with motivation, not only competition, but also personal and collective improvement. The pupils are being initiated in this perspective.

2.5. Task

Design a 4-week unit plan (8 sessions) using the Attitudinal Style model to address these challenges (500 words).

Develop a comprehensive unit plan that describes how the Attitudinal Style model will be applied to effectively address the challenges faced by students in your Physical Education class.

2.6. Answer the Following Questions

1. In what ways can the Attitudinal Style model help overcome the unit challenges in this group-class?
2. How could Ms. García implement reflective dynamics to foster values education? How can the use of an assessment tool (in the framework of formative assessment) help the learning process in this PE unit?
3. What grouping strategies can Ms. García use to help the inclusion of students and to help them feel empowered and motivated?
4. How could students' active participation and creativity be encouraged?
5. Which of the Sustainable Development Goal(s) do you think you promote with the unit you develop?

3. CASE STUDY 3_ADVENTURE EDUCATION

3.1. Instructions

This case study is carried out in groups of between 3 and 5 students, being advisable to create diverse, and heterogeneous groups, taking into account variables such as gender, origin, and previous training, among others.

3.2. Duration

60 minutes.

3.3. Scenario

Mr. Conte is a PE teacher in an urban school, which has a climbing wall and is close to a mountain area. In his Secondary Physical Education class (13 – 14 years old), the students usually do physical activity and sport in the city centre, not in the natural environment. Mr. Conte proposes a didactic unit on Climbing, so that the pupils have experiences in the natural environment and get out of their 'comfort zone'; in turn,

creating an environment that fosters cooperation and positive personal relationships, while making physical education motivating and educational for all.

3.4. Challenges of this Scenario

1. Integral education: resolving the situations of uncertainty offered by the natural environment involves putting into action the cognitive, motor, and socio-affective aspects.
2. Knowledge and appreciation of the natural environment: Most pupils associate Physical Education with physical-sports practice in the school and in facilities located in the city centre.
3. Cooperative work: Pupils are not clear about the difference between working in a team, collaborating, and cooperating.

3.5. Task

Design a 4-week unit plan (8 sessions) using the Adventure Education model to address these challenges (500 words). Develop a comprehensive unit plan that describes how the Adventure Education model will be applied to effectively address the challenges faced by students in your PE class.

3.6. Answer the Following Questions

1. In what ways can the Adventure Education model help overcome the unit challenges in this group-class?
2. How could Mr. Conte implement reflective dynamics to foster values education?
3. How can the use of an assessment tool (in the framework of formative assessment) help the learning process in this Physical Education unit?
4. What grouping strategies can Mr. Conte use to support positive and safe experiences in the unit?
5. Which of the Sustainable Development Goal(s) do you think you are promoting with the unit you are developing?

4. CASE STUDY 4_COOPERATIVE LEARNING + SELF-CONSTRUCTION OF MATERIALS

4.1. Instructions

This case study is carried out in groups of between 3 and 5 students, being advisable to create diverse and heterogeneous groups, taking into account variables such as gender, origin, and previous training, among others.

4.2. Duration

60 minutes.

4.3. Scenario

Mr. Adams is a Physical Education teacher in an urban school, and in his Secondary Physical Education class (13 - 14 years old) a part of the student body has little motivation for Physical Education, demanding to work on content that they can use in their free time, both individually and collectively. At the same time, the school does not have a lot of material for Physical Education. The teacher proposes a teaching unit on juggling, in which students build their own materials, creatively, as they wish; at the same time, he aims to create an inclusive environment that encourages cooperation and positive personal relationships, while making physical education contribute to raising awareness about recycling and sustainability, and be fun and educational for everyone.

4.4. Challenges of this Scenario

1. Engagement: Several pupils have low motivation towards PE.
2. Disparity of skills: Pupils show different levels of hand-eye coordination, but they are creative, or at least demand activities that allow them to foster their creativity.
3. Shortage of material: The school has little material for PE. Although it does not have juggling balls, clubs, or hoops, it does have many tennis balls and balls for different sports.

4. Low awareness of recycling and sustainability: This has been identified as an area for improvement among pupils in this class group.
5. Cooperative work: Pupils are not clear about the difference between teamwork, collaborating, and cooperating.

4.5. Task

Design a 4-week unit plan (8 sessions) using the Cooperative Learning + Self-construction of materials model to address these challenges (500 words).

Develop a comprehensive unit plan that describes how the Cooperative Learning + Self-Construction of Materials model will be applied to effectively address the challenges faced by students in your Physical Education class.

4.6. Answer the Following Questions

1. In what ways can the self-construction of materials contribute to raising awareness of recycling and encourage creativity among students?
2. How could Mr. Adams implement reflective dynamics that allow students to be aware that cooperating helps their learning? How can the use of an assessment tool (in the framework of formative assessment) help to improve the cooperative learning process in this PE unit?
3. What grouping strategies can Mr. Adams use to help overcome the challenges of this P.E. unit?
4. How could active student participation be encouraged? Could pupils investigate and create different forms of juggling (with boats, with the wall, with different materials,...), individually and collectively, without the P.E. teacher sticking to the 'eight' and the 'wheel'?
5. With the unit you develop, which of the Sustainable Development Goals do you think you promote?

5. CASE STUDY 5_ATTITUDINAL STYLE + SELF-CONSTRUCTION OF MATERIALS

5.1. Instructions

This case study is carried out in groups of between 3 and 5 students, being advisable to create diverse and heterogeneous groups, taking into account variables such as gender, origin, and previous training, among others.

5.2. Duration

60 minutes.

5.3. Scenario

Ms. Wang is a PE teacher in an urban school, and in her Secondary PE class (13 - 14 years old), there is a very diverse student body. A small proportion of the pupils feel that they are 'not good at' rhythmic activities, dancing, or they are embarrassed to do it in public. Two-thirds of the class are from the country, but one-third come from three different countries (Spain, Italy, and Ireland). These students who have moved to this country feel that they are not represented in PE, as many of the activities taught are traditional to the country. The teacher proposes a teaching unit on traditional dances, so that the school can embrace the cultures of the other students and allow them to show and express how their culture can be represented in a PE class. Furthermore, with this unit, the teacher aims to promote an education in values; in turn, to create an inclusive environment that fosters cooperation and positive personal relationships, where students feel that they can participate regardless of their characteristics, while making physical education contribute to recycling and sustainability awareness, fun, and educational for all.

5.4. Challenges of this Scenario

1. Inclusion: the student body is very diverse, and not all feel 'able' to participate, progress, and enjoy themselves in PE. Several pupils feel that their cultural roots are excluded in PE sessions, and it is not clear to them that interculturality can be positive.

2. Understanding and appreciation of traditional dances: The majority of pupils are familiar with many types of dances, which are topical, but in many cases do not know or appreciate the contributions of traditional dances.
3. Low awareness of recycling and sustainability: this has been identified as an area for improvement among the pupils in this class group.
4. Collaborative work: the teacher believes that cooperation is not at odds with motivation; not only competition motivates, but also personal and collective improvement. The pupils are being initiated in this perspective.

5.5. Task

Design a 4-week unit plan (8 sessions) using the Attitudinal Style + Self-construction of materials model to address these challenges (500 words).

Develop a comprehensive unit plan that describes how the Attitudinal Style + Self-construction of Materials model will be applied to effectively address the challenges faced by students in your Physical Education class.

5.6. Answer the Following Questions

1. In what ways can the Attitudinal Style + Self-Construction of Materials model help overcome the challenges of the unit in this group-class?
2. How could Ms. Wang implement reflective dynamics to foster values education? How can the use of an assessment tool (in the framework of formative assessment) help the learning process in this PE unit?
3. What grouping strategies can Ms. Wang use to help the inclusion of students and to help them feel empowered and motivated?
4. How could pupils' active participation be encouraged? Could the pupils present traditional dances from their countries, not the PE teacher, and experience them?

5. Which of the Sustainable Development Goal(s) do you think you promote with the unit you develop?

6. CASE STUDY 6_ADVENTURE EDUCATION + SELF-CONSTRUCTION OF MATERIALS

6.1. Instructions

This case study is carried out in groups of between 3 and 5 students, being advisable to create diverse and heterogeneous groups, taking into account variables such as gender, origin and previous training, among others.

6.2. Duration

60 minutes.

6.3. Scenario

Mr. Murphy is a PE teacher in an urban school, which has a climbing wall and is close to a mountain area. In his Secondary Physical Education class (13 - 14 years old), the students usually do physical activity and sport in the city centre, not in the natural environment. Mr. Murphy proposes a didactic unit on Orienteering in the natural environment, so that the pupils have experiences in the natural environment and get out of their 'comfort zone'. Furthermore, with this unit, the teacher aims to promote an education in values; in turn, to create an environment that fosters cooperation and positive personal relationships, while making physical education contribute to raising awareness about recycling and sustainability, interesting and educational for all.

6.4. Challenges of this Scenario

1. Integral education: solving the uncertain situations offered by the natural environment involves putting into action the cognitive, motor and socio-affective aspects.
2. Knowledge and appreciation of the natural environment: Most pupils associate Physical Education with physical-sports practice at the school and in facilities located in the city centre.

3. Low awareness of recycling and sustainability: This has been identified as an area for improvement among pupils in this class group.
4. Cooperative work: Pupils are not clear about the difference between teamwork, collaborating, and cooperating.

6.5. Task

Design a 4-week (8-session) unit plan using the Adventure Education + Self-Construction Materials model to address these challenges (500 words)

Develop a comprehensive unit plan that describes how the Adventure Education + Self-Construction of Materials model will be applied to effectively address the challenges faced by students in your Physical Education class.

6.6. Answer the Following Questions:

1. In what ways can the Adventure Education + Self-Construction of Materials model help overcome the challenges of the unit in this group-class?
2. How could Mr. Murphy implement reflective dynamics to promote values education?
3. How can the use of an assessment tool (in the framework of formative assessment) help the learning process in this PE unit?
4. What grouping strategies can Mr. Murphy use to support positive and safe experiences in the unit?
5. Which of the Sustainable Development Goal(s) do you think you are promoting with the unit you are developing?

7. QUIZ

7.1. Instructions

This quiz consists of 10 questions with only one correct answer option (in bold).

1. Regarding Cooperative Learning (CL), identify the correct relationship between key elements and their description:
 - a) Positive interdependence – Linking personal success with the success of other classmates.
 - b) Promotive face-to-face interaction – Supporting, helping, and encouraging classmates to improve.
 - c) Interpersonal and small group skills – Developing relationship skills (empathy, patience, etc.) for a positive group atmosphere.
 - d) All of the remaining options are correct.**
2. Regarding Cooperative Learning (CL), identify the false key element:
 - a) Group processing.
 - b) Equality of opportunities to learn and succeed.
 - c) Intrapersonal skills.**
 - d) Individual responsibility.
3. Indicate the correct statement regarding Cooperative Learning (CL):
 - a) It is recommended that CL be used for the first time with a class group at the beginning of a new school year or after a break during a holiday period.
 - b) Collaborating is not the same as cooperating.
 - c) In order to achieve a cooperative classroom climate, cohesion of the class-group is essential.
 - d) All of the remaining options are correct.**

4. The Adventure Education model is characterised by:
 - a) It takes place in unfamiliar settings.
 - b) It takes place in a natural environment.
 - c) There is a perception of risk.
 - d) All of the above.**

5. The recommended number of students for its implementation should not exceed:
 - a) 5 students.
 - b) 10 students.**
 - c) 20 students.
 - d) 30 students.

6. The evaluation of the Adventure Education model must obligatorily include:
 - a) Metaphorical reflection.**
 - b) Observation.
 - c) Checklist.
 - d) None of the above.

7. Which statement is true about the 'attitudinal style' pedagogical model?
 - a) The Attitude Sequential Organisation (ASO) could be represented as follows, in terms of groupings: Whole group --- 16 --- 8 --- 8 --- 4 --- 2.

- b) Attitudes are worked on through procedures, and these allow us to arrive at the concepts to be learned, giving them a more real meaning ($A > P > C$).
 - c) Intentional Body Activities (ICA's) are proposed in the third and last phase of this pedagogical model.
 - d) None of the remaining options is correct.
8. Indicate the correct statement regarding groupings in Cooperative Learning (CL) and Attitudinal Style:
- a) **Cooperative Learning - in the 3rd phase of the CA Cycle, groups remain stable and whole class groupings are not usually intended.**
 - b) Attitudinal style - groups are formed by the teacher.
 - c) Cooperative Learning - groups are never formed by the teacher.
 - d) All of the remaining options are false.
9. What is one of the main benefits of implementing the self-construction model of materials in Physical Education sessions?
- a) Increase theoretical instruction time.
 - b) **Develop students' creativity and manipulative skills.**
 - c) Reduce students' active participation.
 - d) Avoid the use of recycled materials.
10. What criteria should be considered by teachers when evaluating materials self-built by students?
- a) The aesthetics of the material, without considering its functionality for physical education sessions.

- b) **The safety, durability and suitability of the material for use in physical education sessions.**
- c) The economic cost of the materials, without taking into account their usefulness for physical education sessions.
- d) The ease with which students can build the material for physical education sessions regardless of the curricular objectives.

*Este libro se terminó de elaborar en junio de 2026
en la ciudad de Sevilla, bajo los cuidados de
Francisco Anaya Benítez, director de Egregeius editorial.*

