

Teaching net and wall games through Competitive Tactical Cycles

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CTC Framework

Competitive Tactical Cycles (CTC) (Gutiérrez, 2025) is a Game Based Approach¹ that structures the learning process through instructional cycles guided by a tactical map. Each cycle lasts between three and four sessions and focuses consecutively on two complementary tactical problems or principles and concludes with a competition session. Throughout the cycle, a reference game is used as the main learning activity. In addition, CTC incorporates elements of the Sport Education model to make the learning experience more motivating and meaningful while also contributing to efficient lesson organization and management.

Teaching and learning process structure: tactical cycles

Cycles are instructional units lasting between three and four sessions. Each cycle focuses on two complementary tactical problems or principles. For example, in an invasion games unit, the first session may address the offensive tactical problem of maintaining possession, followed by a second session focused on the complementary defensive problem of regaining possession. For net and wall games, we propose that the learning process is structured around tactical principles related to the sending phase and others related to the movement phase. Tactical principles related to sending and movement are grouped in the same cycle according to functional complementarity and progressive complexity. For example, within a cycle, the first session could focus on creating free space by moving the opponent, and the second on moving to the base position.

Tactical map

The tactical map serves as a framework for identifying tactical problems or principles, within a sport and its core rules of action, functioning as a blueprint for instructional design. From this framework, key questions and focal points can be developed to generate effective prompts and guide student thinking. The combined use of the tactical map and Sport Education-based strategies also promotes collaborative learning among students.

Reference Game: modified by representation and exaggeration

Each cycle has a *reference modified game*, which may be purpose-designed or one that already exists within the PE games repertory. Reference games should meet the criteria of *modification by representation*, so, they should set a rich learning context while being highly playable. At the same time the reference game should facilitate the focus on the tactical problems/principles of the cycle. In this sense, they also fulfill the pedagogical purpose of *modification by exaggeration*. Although the same general game form is maintained throughout the entire cycle, purposeful variations should be introduced to enhance player adaptability and ensure appropriate challenge levels for learners with diverse abilities.

¹ ... learner-centered teaching and coaching practice in which the modified games set the base and framework for developing thoughtful, creative, intelligent, and skilful players (TGfU SIG, 2021).

Sport Education model elements: competition, teams, and captain role

Although CTC can be implemented within a full Sport Education season, its primary focus is on content learning. Therefore, to reduce teacher workload, it is recommended to include only those Sport Education features that most directly support the development of game performance and sport literacy. In this sense, affiliation through permanent teams (with fixed spaces and distinctive colours, at least on competition days) and a rotating captain role are mainly used to improve class organization and continuity, while competition sessions are included to enhance motivation, authenticity, and meaningful learning.

Reflection Strategies

Throughout the lessons, game practice should be combined with different reflection strategies to enhance students' understanding of tactical problems/principles and core action rules. The teacher should refer to the tactical map when guiding these reflections, so that students have a clear reference for identifying and organizing key information. Additionally, the teacher may incorporate other reflection strategies such as questioning, micro-teaching, freeze-and-reconstruct, peer evaluation, and time-outs, among others. To maximize motor engagement time and ensure cognitive participation for all students, it is recommended that most reflection activities take place within teams. In this way, the teacher pauses only one team to guide the reflection process, while the others continue playing.

Teaching unit of net and wall games through competitive tactical cycles

This proposal presents a CTC work unit, designed from a net and wall thematic approach. An example applied to a specific sport (pickleball) can be found in Gutiérrez & Segovia (2025). The following outline describes a 10 to 15 session teaching unit, establishing the overall structure, reference games for each cycle, and suggestions for reflection strategies, practice tasks, and game modifications to create rich learning environments for all students. However, these materials are not intended to be a step-by-step guide that prescribes the teacher's actions minute by minute. It is essential that teachers adapt their instruction flexibly to the changing context, placing each student at the centre of their learning process and applying the strategies that best promote understanding at each didactic moment.

Net & Wall CTC unit features

Teams and roles²: the group is organized in balanced permanent teams with one captain and one manager.

Captain: transmits information from the teacher to the team and reinforces the tactical goal and other key information of the session using the tactical map³.

Manager: he/she helps with the equipment and competition organization.

Execution levels: each player chooses which level suits his/her performance: Levels include upper levels (e.g. if a player chooses Level I, catch and throw, he/she can also hit⁴. Levels:

I: catch and throw.

II: catch and hit.

III: control and hit (two hits).

IV: hit.

V: hit with a racket.

² If we do not give the competition a formal character, the role of the sports director can be greatly reduced, and therefore could be carried out by the captain. This would simplify the organization; however, we should aim for all students to take on a role at some point during the unit, or in units that take place close in time.

³ All students should have their own copy of the tactical map, and the coach should always have it at hand.

⁴ Based on levels proposed by Mitchell, Oslin and Griffin (2020).

Recommendation: students will want to move on to hitting levels as soon as possible, which will often lead to a tactical impoverishment of the game. Therefore, it is beneficial to establish a game phase for everyone at Level I and increase the offensive difficulty through other elements, such as balls with low bounce. The teacher will gradually suggest that students who demonstrate good performance and understanding move up to the next level. This recommendation is especially important in the first two tactical cycles (line game and spikeball), both because they are the first sessions and because of the nature of the games.

Learning new games progression phases⁵: when learning a new game, players must go through three phases in which they must complete rallies with a minimum average number of exchanges in order to move on to the next phase. If they do not reach the minimum number, they must choose an easier execution level or seek alternative modifications to the structural elements (e.g.: using a different ball or adjusting the size of the court or the net). Phases:

- A. Cooperation (+10 shots of cooperative rally). If players can perform rallies of 10 or more shots, this ensures the understanding of the rules and suitability of the chosen level of execution.
- B. Challenge (+10 shots rally). The players try to move their partner around but prioritize not making errors and not ending the rally.
- C. Competition (5-10 shots rally average).

Tactical cycles: in each tactical cycle principles and skills are learnt through a modified game. The complexity of the games increases as the unit progresses. Each cycle consists of between 2 and 4 lessons. Each cycle includes a “sending phase tactical principle” and a “movement phase tactical principle”. The sending tactical principle is addressed first, followed by movement one. The cycle concludes with a competition between teams (see table 2. Unit plan).

Competition⁶: with the help of the captain, players ranked themselves by game performance. Each player faces an opponent of the same rank. Teacher and students decide if they want to keep records of the competition.

Sport Education elements: more elements of the Sport Education model may be introduced (e.g.: roles, formal competition, festivity, records...).

Game form: it is recommended to use 1vs1 form all through the unit. At least in the first 3 cycles. If we use the 2 vs 2 game, we must be aware that it reduces participation and increases tactical complexity, so we could add one specific lesson to the cycle. In *spikeball/roundnet* we should not use cooperative passes within the team (as in the formal sport), since this would increase the difficulty and alter the tactical principles.

Assessment: At the end of the unit, two assessment tools are suggested: a GPAI (peer-assessed) and a partner reflection sheet. The GPAI captures technical–tactical indicators that can be easily observed and are directly aligned with the tactical principles addressed throughout the unit. This GPAI may be used on competition day and is valid for any of the games included in the unit. The teacher may also design more specific and detailed GPAIs according to a specific game or tactical cycle.

The goal of the reflection sheet is to support metacognition and shared reflection, helping students connect the theoretical concepts learned and expand their sport literacy.

⁵ Based on Tim Hopper’s (Victoria University) ideas shown during workshops at TGfU SIG conferences.

⁶ The main function of the competition is to increase the meaningfulness of the “training” sessions, but it is not advisable to establish a formal competition if the unit do not include a deliberate process to ensure the educational values. Therefore, the competition should be self-refereed, and keeping scores is not recommended.

Table 1. Net and wall games TACTICAL MAP

Tactical principle	Key information / Action principles
	SENDING PHASE
I. Search for free <u>space</u> : moving the opponent.	<p>Did you look at the opponent before throwing? Where was your opponent? Make it hard for him/her to get it:</p> <ul style="list-style-type: none"> • Aim for free space • Open angles • Vary: left-right; front-behind; strong-loose
II. Reduction of the trajectory <u>time</u> (from where you throw/hit the ball until it bounces).	<p>Safe throwing/hitting, but if you can, make it quick (less time to response for the opponent). How is it faster?</p> <ul style="list-style-type: none"> • Hard • Short • Flat • Throwing-hitting technique: If hitting is allowed
III. Reduce the opponent's ability to <u>read</u> your sending.	<p>Safe sending (throwing or hitting), but if you can, pretend you're going to send somewhere else and change the gesture at the end ("deceive"): feints.</p>
IV. Take advantage of the <u>opponent's weaknesses</u> .	<p>Look for opponent's weaknesses on:</p> <ul style="list-style-type: none"> • Opponent's movements: how is your opponent situated? Is he/she covering one side more than the other? • Opponent's sending skills: how does your opponent catch/hit? Is one side more difficult for him/her than the other?
	MOVEMENT PHASE
I. Move to the <u>base position</u>	As soon as you send, find your base position depending on where your opponent will probably throw: center of the "window" of your opponent's next throw.
II. Stay <u>ready</u>	Adopt an alert position: legs flexed and active that allow you to be prepared and oriented.
III. <u>Anticipate</u> the return	Watch your opponent to guess where he/she is going to send. Watch out for feints!
IV. React to the <u>opponent's strengths</u>	Think about how your opponent is scoring and cover that section of your game.

Table 2. Unit Plan – "Net and Wall Games"

Number of CTC / Reference Game	Lesson 1 Sending phase tactical principle	Lesson 2 Movement phase tactical principle	Lesson 3 Competition
1) Line Game	Search for free <u>space</u> : moving the opponent	Move to the <u>base position</u>	Line Game
2) Round net	Reduction of the trajectory <u>time</u>	Stay <u>ready</u>	Round net
3) Square Game	Reduce the opponent's ability to <u>read</u> your sending	Anticipate the return	Square Game
4) Two hands tennis / mini tennis	Take advantage of the <u>opponent's weaknesses</u> .	Opponent's <u>strengths</u>	Two hands tennis / mini tennis
5) Pickleball / Students' game	All of them	All of them	Pickleball / Students' game

CTC 1 Reference Game	Lesson 1 Sending tactical principle	Lesson 2 Movement tactical principle	Lesson 3 Competition
Line Game	Search for free <u>space</u> : moving the opponent	Move to the <u>base position</u>	Line Game

LINE GAME⁷



Game set up

1 vs 1: The ball must bounce once on the player's own court and pass between the two cones. The opponent must hit it before it bounces in their court.

Variations and modifications

Students should determine the most suitable net width and type of ball. Try using a volleyball and hitting with two hands (front pass).

Loss of tactical challenge: "players beat the level"

If an easy solution is found, introduce a modification to keep it a rich learning context (e.g., if players use decisive drop shots, you could add a dead zone or use a ball with a higher bounce).

Possible practice tasks

For students who struggle to move from frontal play to opening angles in search of free space: place hoops or lateral zones where they must perform a sidestep and use a side hand position to open the angle.

Keeping the optimal challenge during competition: modification by adaptation (Hopper, 2011)

Before moving on to competition, students should learn the self-adjustment modification. Each player has his/her own cones. Every two-point difference, the nets are modified in the following way: first, widen the net of the player who is losing (thus enlarging the winner's "court"). Then, if the difference reaches four points, narrow the net of the player who is winning. Continue adjusting until the point difference is eliminated (e.g., if the gap was 2 points, keep the modification until a tie; if it was 4, until the difference is reduced to 2).

⁷ Levels II and IV: <https://x.com/DrAshCasey/status/1446433707020242994?s=20>

Modification by adaptation: https://x.com/Davi4_Gutierrez/status/1447880603714588672

CTC 2 Reference Game	Lesson 1 Sending tactical principle	Lesson 2 Movement tactical principle	Lesson 3 Competition
Spikeball / Roundnet ⁸	Reduction of the trajectory <u>time</u> (from when I throw/hit until the ball bounces):	Stay <u>ready</u>	Spikeball / Roundnet

SPIKEBALL / ROUNDNET



Game set up

1vs1. The ball must bounce inside the hoop or circle painted on the ground. The hoop acts as the rebound wall. The official game is called **Spikeball** or **Roundnet**, and it is played in a **2vs2 format** with a round horizontal net supported by legs, following volleyball-style rules.

Variants and modifications:

Students must determine the most suitable hoop size and type of ball. Try using volleyball and perform a two-handed front pass. It can be played in a 2vs2 format (without passing to the teammate), however, this version tends to be more complex and involves less movement, so is preferable 1vs1 to focus on the tactical principles.

Loss of tactical challenge: “players beat the level”

If an easy solution to get the point is found, introduce a modification to maintain a rich learning environment (e.g.: 1) very definitive drops could be countered with a dead zone or by using a ball with a higher bounce; 2) if powerful sends make very difficult to defend them, change the ball, change the execution level, use a bigger ball and use only chest passes or set court external boundaries).

Possible practice tasks

If you want to play at levels II or III, extend the cooperation phase until it is mastered.

Keeping the optimal challenge during competition: modification by adaptation

Whoever is losing can return to level I until the score is tied. This prevents easy scoring (the player can catch the ball) and allows the player that goes below on the scoreboard to be more offensive by being able to throw. The rebound zone can be expanded (for the player that is losing) or reduced (player in the lead) using hoops of different sizes or by painting concentric circles.

⁸ <https://www.youtube.com/watch?v=lc14rXx3-tc>

CTC 3 Reference Game	Lesson 1 Sending tactical principle	Lesson 2 Movement tactical principle	Lesson 3 Competition
Square Game ⁹	Reduce the opponent's ability to <u>read</u> your sending	Anticipate the return	Square Game

SQUARE GAME



Game set up

1 vs 1 vs 1 vs 1

The ball is hit after it bounces in the player's own square, sending it to another square. All hits must go from low to high. The ball cannot be returned to the same player it came from. Points are recorded for errors (lost points). If the ball bounces on the line, it is considered out.

Variations

Use benches to mark the lines, and explore other variations here: <https://castlesports.com/blogs/news/best-4-square-variations>

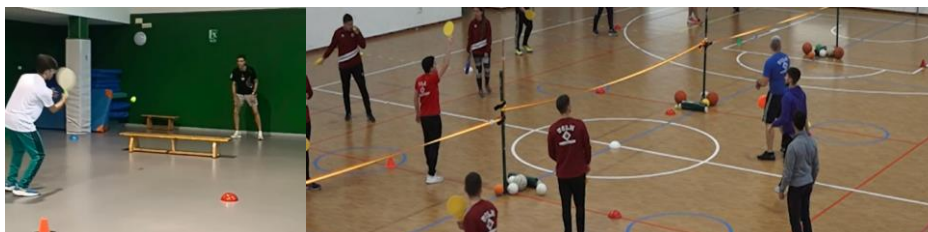
Keeping the optimal challenge through a self-regulated competition

Start with squares organized by level, according to the ranking. After 5 minutes, the player with highest scoring (the one losing) moves down a league, while the player with the fewest points moves up a league.

⁹ <https://www.youtube.com/watch?v=dAsMYsMdy54>

CTC 4 Reference Game	Lesson 1 Sending tactical principle	Lesson 2 Movement tactical principle	Lesson 3 Competition
Two hands tennis / mini tennis	Opponent's <u>weaknesses</u>	Opponent's <u>strengths</u>	Two hands tennis / mini tennis

TWO HANDS TENNIS / MINITENIS



Game setup

With a defined court and a net (which can also be a dead zone, a bench, or a regular net), players use their hands (two hands tennis) or paddles (mini tennis) to play.

Variations

All execution levels can be used. If no equipment is available, each player can play at a different execution level.

If Level I is used, it is advisable to play with a large ball to encourage the use of both hands. With a wall behind, players can include a rebound play, similar to padel. Vary materials, spaces, nets, etc., to keep the activity rich and engaging.

Possible practice tasks

If playing with rackets (Level V), extend the cooperation phase until players gain control. Provide specific feedback on forward hitting technique for those who consistently strike with the paddle or hand facing upward.

Keeping the optimal challenge during competition: modification by adaptation

If players are using rackets, use court dimensions to adjust the level of challenge and find the optimal difficulty.

Game Performance Assessment Instrument (GPAI)

Player's Name: _____ Group: _____
 Observer's Name: _____ Date: _____
 Game: _____

Coding Criteria (based on success in actions)

- 5: Very high performance (success in almost all actions)
- 4: High performance (success in most actions)
- 3: Average performance (success in about half of the actions)
- 2: Low performance (success in less than half of the actions)
- 1: Very low performance (success in few actions)

1. Reading and positioning (base position)	Finds the most appropriate base position for the next play: covers space and shows initiative.
2. Readiness	Performs a small preparatory jump to initiate adjustment movement for the next hit.
3. Hitting/Throwing execution	The player hits or throws the ball without breaking the rules and within the court boundaries.
4. Hitting/Throwing decision-making	The player directs the ball to a space or uses a trajectory that creates some difficulty for the opponent's reception.

Complete the table below with the score you believe best describes your colleague's performance. In the "comments" section, explain why you assigned that score.

	Score	Comments
Reading and positioning (base position)		
Readiness		
Hitting/Throwing Execution		
Hitting/Throwing Decision-making		

Share your evaluation with your colleague, highlighting which aspects are their strengths and how, in your opinion, he/she could improve on their weaknesses.

INSTRUMENT FOR REFLECTION AND SELF-ASSESSMENT

Player 1: _____ Date: _____

Player 2: _____ Group: _____

Within the team, organize players in pairs. These pairs reflect on their own performance related to each of the tactical principles. Keep the map ready to consult. The partner helps to clarify ideas and confirm what the player thinks about her/himself.

A. What do you think that you do best. Explain to your colleague and write it.

Player 1:

Player 2:

B. Where do you think that you have more room for improvement? Explain to your colleague and write it.

Player 1:

Player 2:

C. Among the games played in the unit, in which one do you think you develop your best performance? Explain to your colleague and write it.

Player 1:

Player 2:

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