



Topic 1. MAIN STAGES IN THE DEVELOPMENT OF TENNIS

Module I. Training in sport tactics and physical condition of athletes








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CONTENT



-  General development phases
-  Stage 1
-  Stage 2
-  Stage 3
-  Building an individual game style





GENERAL DEVELOPMENT PHASES

Hohm (1987)	Bompa (2000)	Grosser & Schonborn (2003)	Lubbers & Gould (2003)	Balyi & Hamilton (2003)	Wolfenden & Holt (2005)	Tennis (2007)	ITN
Pre-Competitive (6 – 10 years)	Pre-puberty – initiation	Versatile Basic (4 – 6/7 years)	Introduction / foundation stage I (6-8 years)	Fundamentals (6-9 years)	Sampling (3 – 8 years)	Explore (4 – 7 years)	10.3 10.2 10.1 10 9
Overall (11-14 years)	Puberty – athletic formation	Basic (6/7 – 9/10)	Introduction / foundation stage II (9-12 years)	Learning to train (8-12 years)	Specialising (8-13 years)	Development (7 – 10 years)	9 8 7
Specific (15-18 years)	Post-puberty – specialisation	Development – I (9/10 – 11/13)	Refinement and transition stage I (10-15 years)	Training to train (11-16 years)	Investment (13-15 years)	Encourage (10 – 12 years)	7 6 5
High performance (18+)	Maturation - high performance	Development – II (11/13 – 14/15)	Refinement and transition stage II (15-20 years)	Training to compete (15-18 years)	Maintenance (20+ years)	Enhance (12 – 15 years)	5 4
		Connecting (14 – 16/18)	World class performance stage I (15-22 years)	Training to win (17+ years)	Repayment (30+ years)	Cultivate (15 – 17 years)	4 3 2
		Top-class competitive (16-19)	World class performance stage II (23-30 years)	Retirement/ Retaining/ Active for life		Performance (17+ years)	2 1

STAGE 1

FUNdamentals



1. Play and continue playing (4-10 years old)

- *Teaching and skills acquisition in a fun, modern and healthy way*

→ Objective for the Players: to learn, develop and master all fundamental movement skills while having fun

→ Objective for the Coaches: to model athletes who have a better trainability for long-term, sport-specific development

→ Fun & Structure: overall development, physical skills and fundamental movement skills, the ABCs of athleticism

STAGE 1

FUNdamentals



2. General characteristics of players in this age group

- ‘Critical period of speed development’: age 6-8 for girls and 7-9 for boys
- Linear, lateral and multi-directional speed
- First ‘window of accelerated adaptation to speed’
- Strength training: body weight, medicine ball and Swiss ball exercises
- Rules and ethics of sports
- No periodization, but all programs are structured and monitored

STAGE 1

FUNdamentals



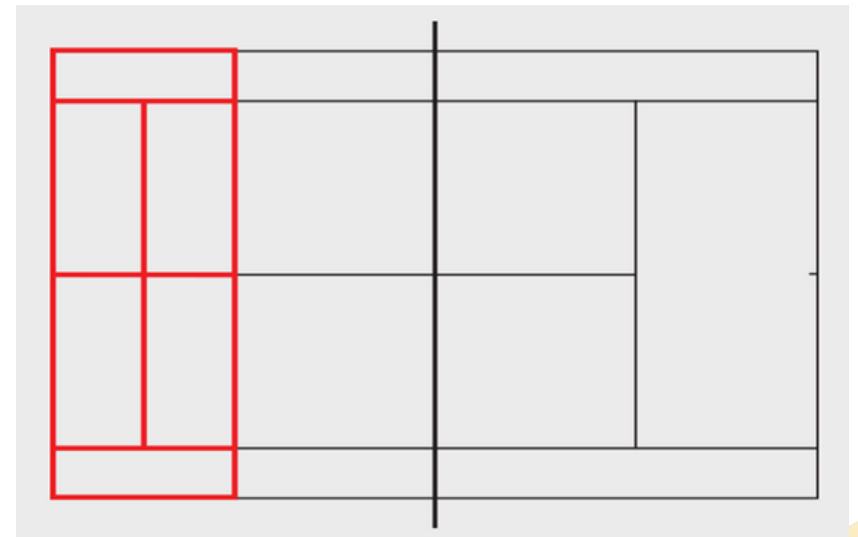
3. First steps in tennis – stages before red court

- Fundamental movement skills: locomotor, manipulative and stability
 - initial (2-3 years)
 - elementary (4–5 years)
 - mature (6–7 years)



STAGE 1 *FUNdamentals*

- **Red: 4-8 year olds – serve, rally and score**
 - Court size is 11m x 5.5m
 - Balls are around 75mm in diameter and 75% slower
 - Racket size: 43cm-53cm (17"-21")
 - Nets at 80cm high (in the middle)





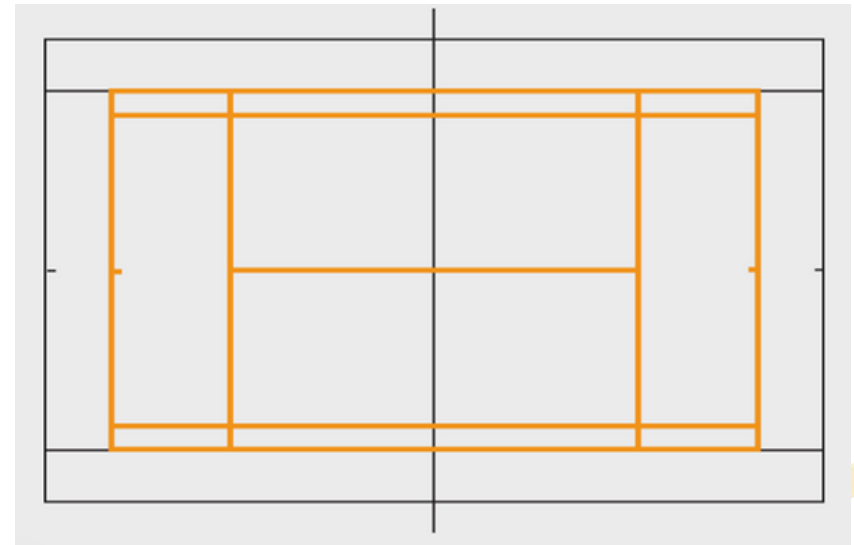
- **Orange: 8-9 year olds – develop a rounded game**

- Court size: Singles - 18m x 6.5m; doubles - 8m x 8.23m
(the full width of a standard singles court)

- Balls are firmer than red tennis balls but are still 50% softer than regular balls;
50% slower through the air than standard tennis balls

- Rackets are between 58cm- 63cm (23"-25")

- Nets should ideally be 80cm high
(in the middle)



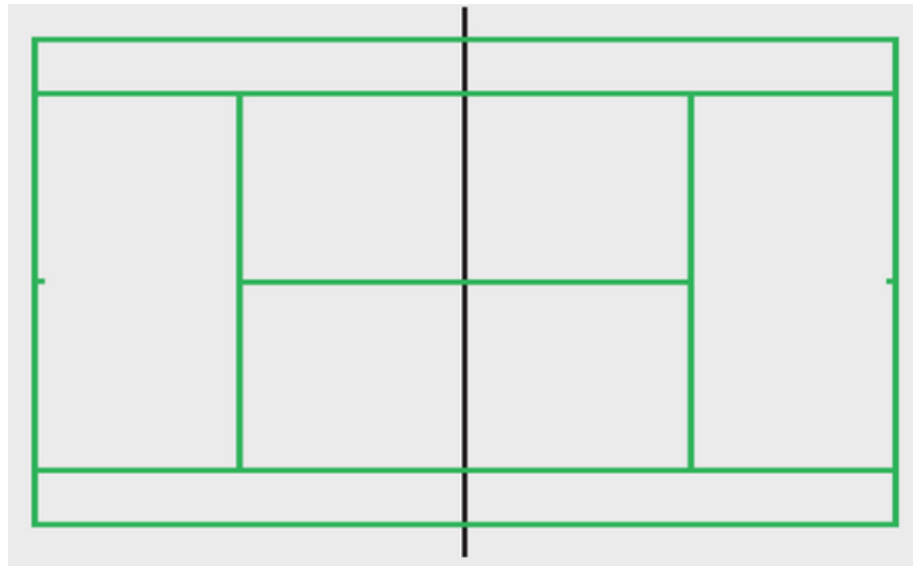


- **Green: 10 year olds – put skills to the test**

- Full size courts for both singles and doubles

- Balls are only 25% slower through the air than regular balls and are typically the same size as standard tennis balls

- Rackets are usually 63cm-66cm (25"-26") nets are 91cm high





IN-BETWEEN STAGES 1-2

- AGE: Males 9 – 12 / Females 8 – 11 years
- Objective: Learn all fundamental sports skills (build overall sports skills)
- ‘Window of accelerated adaptation to motor coordination’
- Strength
- Endurance
- Basic flexibility – speed, agility, quickness and change of direction
- Competition should be well structured
- Double periodization
- A 70:30 training/practice to competition-ratio



STAGE 2

Training to Train

Intermediate players (11-14 years old)

Objectives: build the “engine” and consolidate sport specific skills

- Consolidate basic sport specific skills and tactics
- ‘Window of accelerated adaptation to aerobic and strength training’
- Onset of Peak Height Velocity (PHV)
- Priority to aerobic training



STAGE 2

Training to Train

Chronological and biological age

- Variation in the physical, cognitive and emotional development of athlete between the ages 10 to 16;
- Scaled down version of adult athlete training and competition models VS determination of the biological age of athletes and using this information as the foundation for athletes' development models;
- Peak Height Velocity (PHV) as a reference point for the design of optimal individual programs
 - Relation to “critical” or “sensitive” periods of trainability during the maturation process
 - Average age for the onset of PHV is 12 for females and 14 years for males
 - Why PHV?
 - The Five S of training and performance

STAGE 2

Training to Train



General characteristics of players in these ages

- Females:
 - First window - immediately after PHV
 - Second window begins with the onset of menarche
- Males: 12 – 18 months after PHV

Main elements of players' physical, technical, tactical and psychological preparation

- Single, double and occasionally triple periodization is the optimal framework
- Optimized training and competition ratios: 60/40 (% acc. sport and individual specific needs)



STAGE 2

Training to Train

Creation of tournament program

- End of uniformity in the workload and the beginning of periodization as a means of its planning

Periodisation should provide the players:

- Achievement of training goals
- Balance between general and specific training methods, tournament participation and motor skills development
- Co-ordinating and planning age-appropriate loads: volume/intensity
- Giving importance to the biological functioning of the human organism
- Accelerated development of playing qualities
- Reducing the risk of injuries, overtraining and mental burden



STAGE 2

Training to Train

The goal of planning in this period is not to have a peak performance in the training process

- No peak performance in tennis players aged 12
- 13 yo players: the goal here is to learn how to reach a peak achievement
- 14 yo players: two peaks

Players with less training experience

- Quantitative and qualitative characteristics of training are important
- The two-cycle periodization is most appropriate for this period
- The training tools and methods are different from those used with professional tennis players.



STAGE 2

Training to Train

- Tournaments win-loss ratio of 3:1 and 2:1
- In conclusion, participation in tournaments aims to:
 - Increase performance, motivation and experience
 - Expose players to the tennis lifestyle - travel and related activities
 - Build independence in tennis players
 - Teach the player how to use set tactical and technical tasks in challenging matches
 - All of these factors should carry more weight than winning or ranking (Lubbers & Gould, 2003).



STAGE 2

Training to Train

‘The teacher does not teach, but arranges ways to make the children discover.’

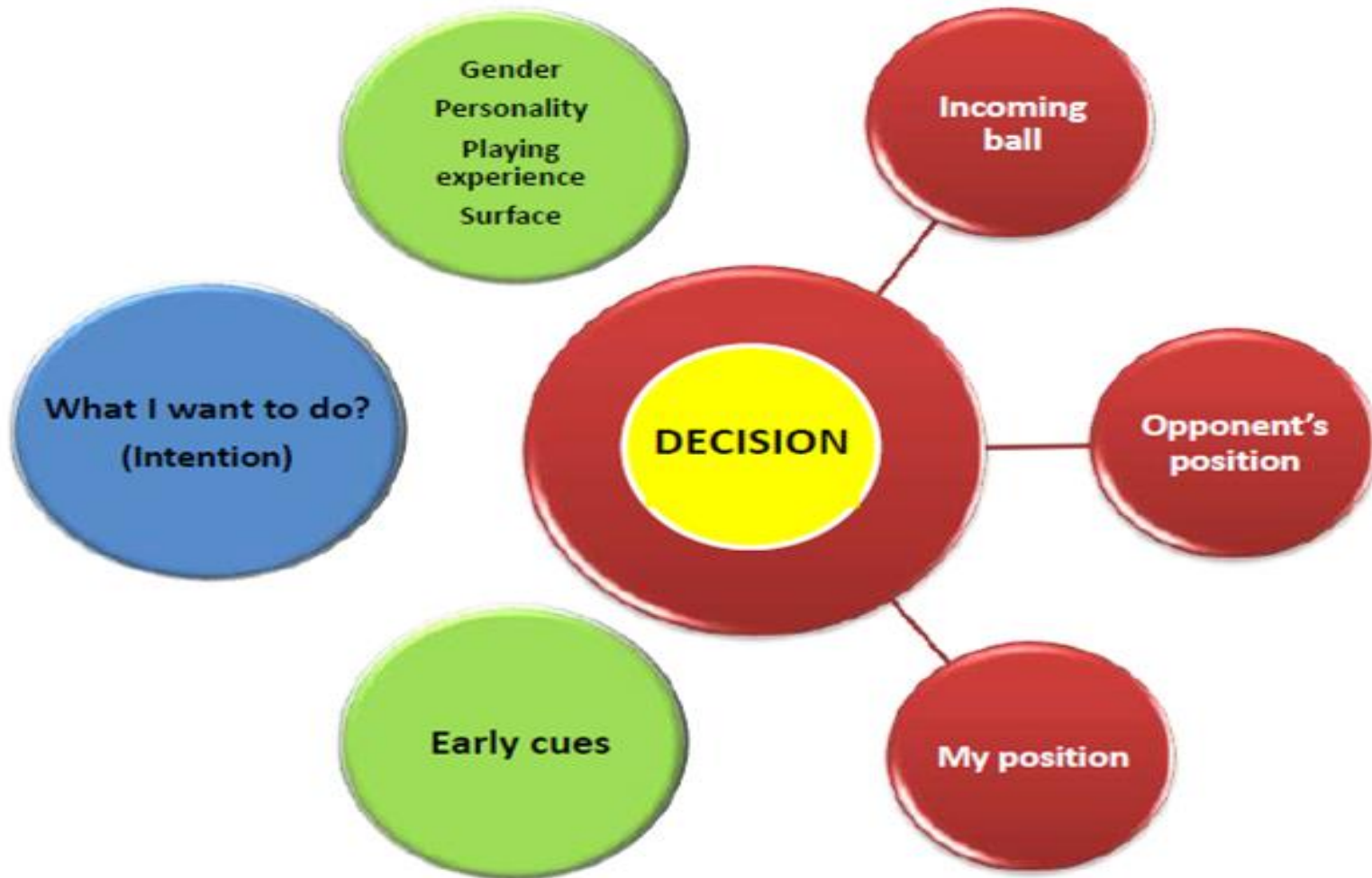
Jean Piaget – Swiss pedagogue

What (Tactical intention) & How (Where and Which shot)

- Tactical intentions
 - (Starting) Staying in the point
 - Creating advantage
 - Finishing the point



What influences the decision making process?





	Serving	Returning	Baseline	Net game	Against net player
Staying					
Creating advantage					
Finishing					



STAGE 3

Training to Compete & Win



1. Training to Compete

- AGE: Males 16 - 18 / Females 15 - 17 years
- Objectives: Optimize fitness preparation and sport, individual and position specific skills as well as performance
- Athletes, who are now proficient at performing both basic and sport specific skills, learn to perform these skills under a variety of competitive conditions during training.
- Training to competition and competition-specific training ratio is 50/50



STAGE 3

Training to Compete & Win



2. Training to Win

- AGE: Males 18 years and older / Females 17 years and older
- Objectives: Maximize fitness preparation and sport, individual and position-specific skills as well as performance
- All of the athlete's physical, technical, tactical, mental, personal and lifestyle capacities are now fully established and the focus of training has shifted to the maximization of performance
- Intensive training with prophylactic breaks (burnout prevention)
- Training to competition ratio is 25/75.

STAGE 3

Training to Compete & Win



Creating of tournament program

- Training which has priority over participation in tournaments
- A player needs to be built up in all the fundamental aspects of tennis to be able to cope with the demands of tournaments, trying not to skip periods but going step by step
- 10 weeks prep/2 weeks rest.





STAGE 3

Training to Compete & Win

- Individualization of the athlete's preparation in order to reach the maximum potential **block periodization: ATP periodization"** (A - accumulation, T - transformation, P - realization)
- Block periodization basic principles:
 - Concentration of highly specialized training loads, similar in energy, intensity and nature of the activity performed - organized in specific periods (blocks)
 - Cumulative effect of the training loads
 - Residual training effect
 - Training effect with delayed realization.

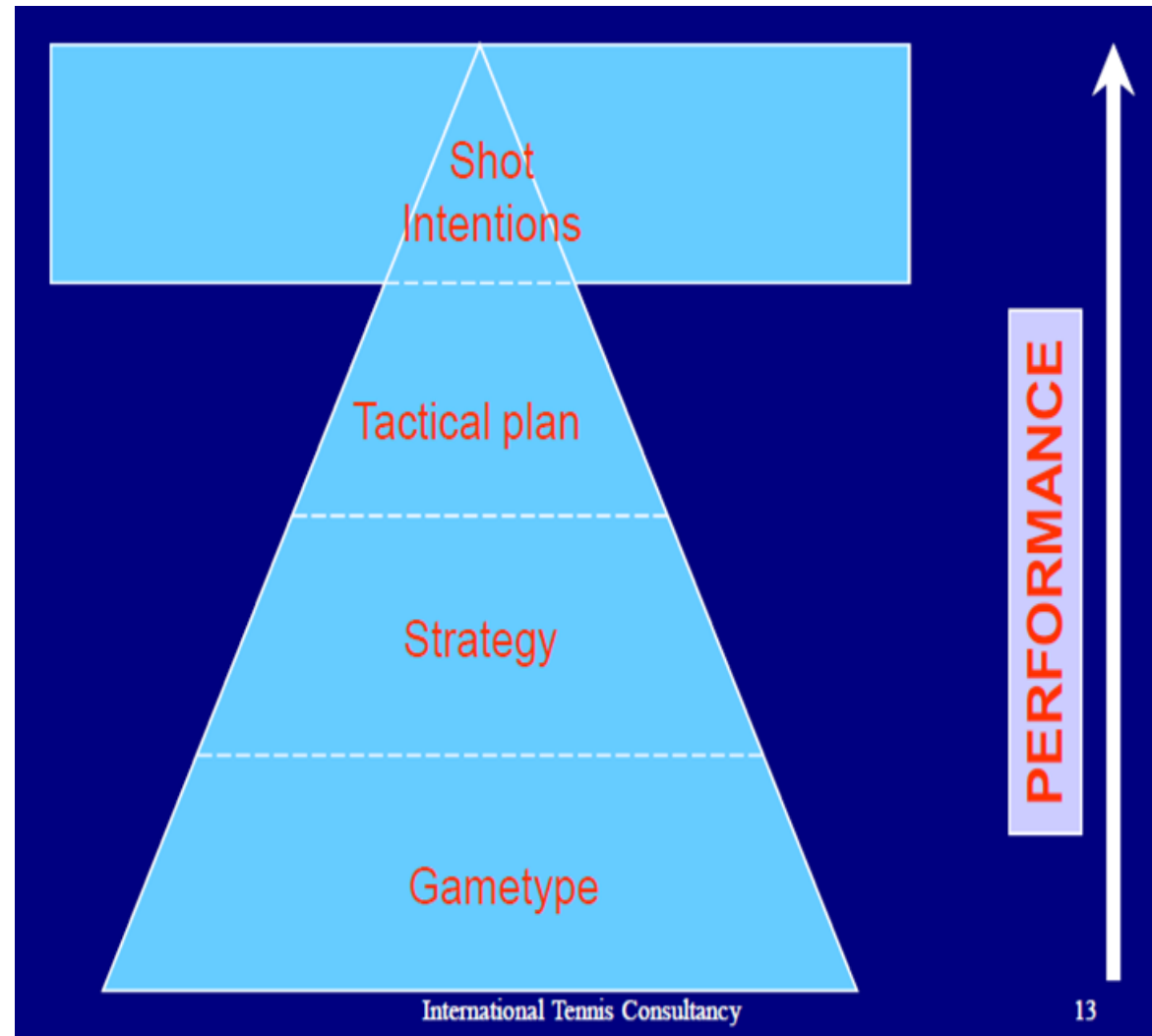


Building an individual game style

The game type/style of a player depends on their:

- Character
- Physical abilities
- Qualities and limitations of their technique

→ Aggressive baseliner, serve and volleyer, pusher, counter puncher or an all-rounder?





Building an individual game style

Play > Learn > Play

I. Tennis as a game of mistakes

- Learning process based on failures
- Open system = “out of script” fail
- The practice inside the practice
- Ideal challenge: students must succeed
- Progression/Overload.
 - FAQ: Do players run the risk of learning “wrong movements”?

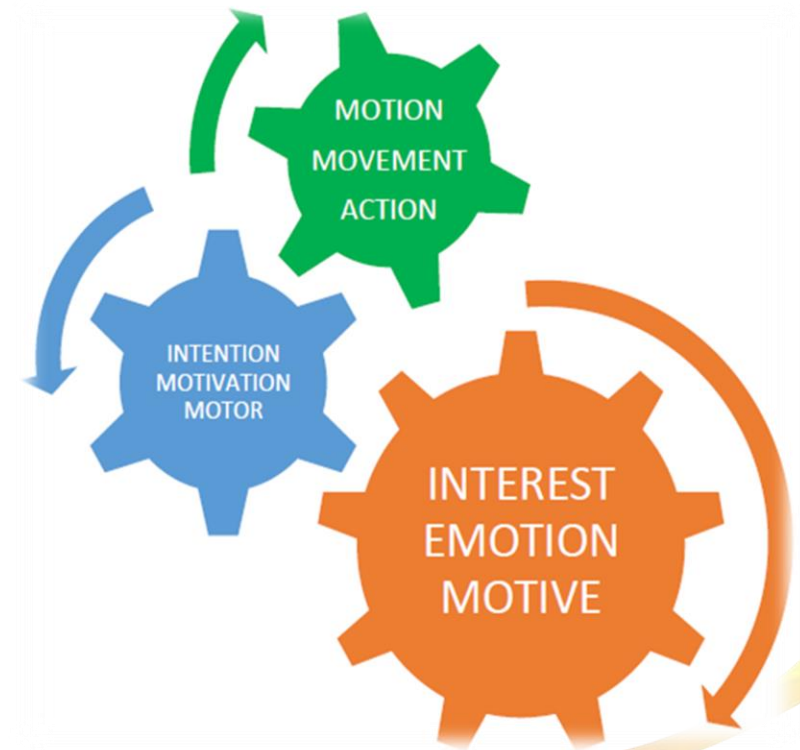


Building an individual game style

II. The right movements

- Open skills come before closed skills: various situations
- Control of the ball
- Understanding
- Practice

III. Tennis is a game of open reality



Building an individual game style



The 'IDEAL PLAYER' concept

- Physically fit: healthy, in shape, resistant. Hard to break
- Mentally prepared: strong, balanced. Hard to destabilize
- Tactically disciplined: aware, intelligent, astute. Hard to overcome
- Technically competent: versatile, efficient, effective. Hard to explore



Building an individual game style: three major methods



1. Feeding balls from the basket

- Controlled
- Closed system
- Technical
- Predictable/Unpredictable
- Far from reality

2. Cooperative rallies

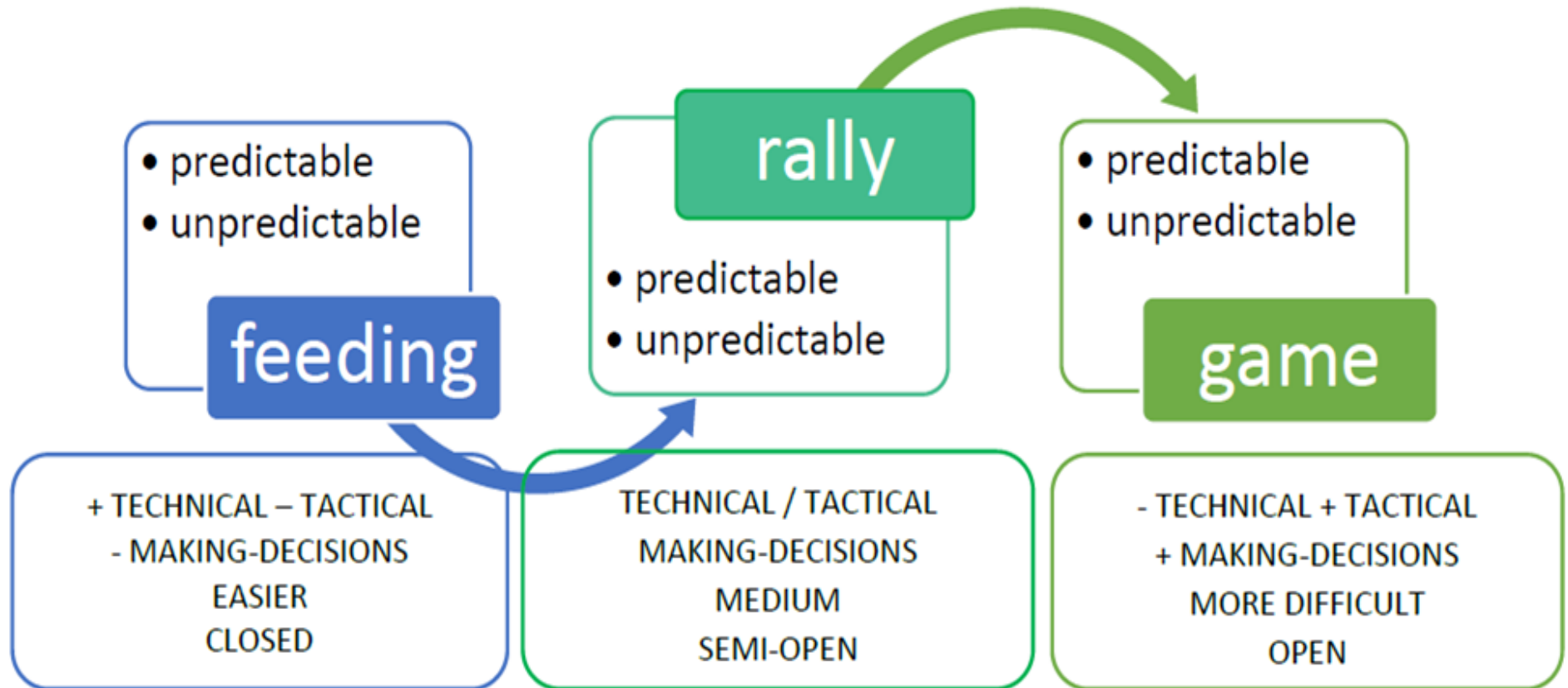
- Intermediary
- More complex than basket feeding
- Promotes mutual help and a dose of unpredictability
- Conservative tactics
- Semi-open system
- Ethical attitudes

3. Game-based method

- Motivational
- Competitive tension & automatic decisions
- Open game style
- Optimization
- Real game experience



Building an individual game style



- Technique – the tactical function
- Technique – the biomechanical model



THANK YOU!

*For more information follow the presentations of **TC4DC** program*

