

Perceptions of coaches of a scaled tennis equipment program

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ABSTRACT

Coaches have an instrumental role to play in attracting and retaining more people of all ages in the sport of tennis. The tools that they use can enhance that objective. Over the past decade the research in scaled tennis equipment has intensified along with the use by coaches. It is appropriate at this juncture to understand what the perceptions of coaches using scaled tennis equipment. With this insight, best practices can be developed to be shared with other coaches to maximize the growth of our sport.

Key words: coaches, modified tennis equipment, constraints based approach, perceptions.

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INTRODUCTION

The need to develop the whole athlete should be a consideration for all coaching objectives and actions. Coaching for the athletes' holistic development and well-being requires taking into account the emotional, personal, cultural and social identity of each athlete and how this identity influences sports development and performance. This applies to athlete development spectrum-from young children to masters' athletes. A common framework for setting comprehensive athlete outcomes is the Four C's model (USOC, 2017).

Athlete Outcome	Description
Competence	Sport-specific technical, tactical and performance skills: overall health, fitness, and physical wellbeing.
Confidence	Self-belief, resilience, mental toughness and sense of positive self-worth.
Connection	Interpersonal skills, ability to build and sustain meaningful and positive relationships.
Character	Respect for the sport and others, integrity, self-discipline and ethical and moral well-being.

Table 1. The Four C's Model of Comprehensive Athlete Outcomes (USOC, 2017).

CONTEXTUAL FIT

In this day in age of the internet there are numerous coaching training activities available to search. These prescriptive coaching sources although very assessable should not be implemented without attention to context. Quality coaching entails the ability to adjust one's coaching knowledge to the specific requirements of the athlete, and suite the specific environment in which the coach is in (USOC, 2017).

CONSTRAINTS BASED APPROACH

The ever-changing game conditions suggest that decision-making and action be defined in a moment-to-moment basis. The perception of key informational sources reveals the real adjustments between the properties of the task and the individual player's characteristics (Davids, Araujo, Hristovski, Passos, & Chow, 2012).



During a tennis rally, the opportunities to act offered by the situations that arise from the continuous relationship between the player and his/her opponent. A player must be perceptually in tune with the match characteristics that inform how and when to act to achieve a goal.

The player does not passively receive information but seeks it. Improving the ability to act successfully results primarily from increasing the perceptual attunement to relevant properties of the environment that guide action to achieve a goal.

TRAINING: A PROCESS OF MANIPULATING RELEVANT CONSTRAINTS

Training is a method centered on the manipulation of the key constraints that magnifies information sources that assist players to achieve their goal (Carvalho, Araújo, García-González, & Iglesias, 2011). Constraints refer to the demands that are placed on the action that can be of a varied nature; instruction and augmented feedback given by the coach, movements of the players, type of ball or racquet that is used, or the movement amplitude of a certain joint (Carvalho, Correia, & Araujo, 2013).

These constraints, which concurrently interact to channel behaviour, are conceptually organized in three main categories: 1) the task, 2) the player, and 3) the environment. These three constraints influence training and performance.

Task constraints speak to the characteristics of the task such as goals, rules, and implements. The way players interpret that action depends on the context it is received. The ability to reach a given goal is constrained by the condition in which the task is executed. For example, the players' behaviour is influenced if the player is asked to keep five rally balls from the baseline before forcing an aggressive shot. If that aggressive shot is created with a forehand, they score a point. The coach can utilize different strategies to enforce task constraints, knowing that all the categories of constraints are always interacting (Carvalho et al., 2013).

The result of manipulating the different task constraints changes according to the playing level of the players. The constraints for the player are mainly concerned with:

- 1) Structural that is, those that are relatively constant over time: the morphology, the body composition or, even, the skill level in a given task.
- 2) Functional, referring to the thoughts, emotions, motivation, fatigue, speed, and concentration.

Constraints that are structural cannot be changed but can be present when choosing training opponents. When working with these constraints, practice situations can be designed to limit the fact of a player being taller, stronger, being more tired, or having a lower level of performance. For example, as a tall player with a good serve to engage in point play using only one serve as opposed to two serves that are allowed according to the rules of the game (Carvalho et al., 2013).

Environmental constraints are both social and physical. Players' development is dependent on the training climate built by the coach. The coach can set two different types of social environment: task or ego oriented (Roberts, Treasure, & Conroy, 2007).

Ego oriented looks at competition environment and how the player compares his/her performance with others performance. Task-oriented training environment calls to the intrinsic motivation of the player and incentives to improve his/her performance, having the reference of what he/she previously did.

Different sources of constraints work together at the same time to influence behaviour. The constraints-led approach supports that players should learn how to perform in the face of internal and external variability. The ability to manipulate constraints intervention allows for the induction of functional variability in key situations. This method promotes the development of better perceptual attunement to the on-going match characteristics that the player receives, and is also dependent on the characteristics and circumstances surrounding how to achieve a specific goal (Carvalho et al., 2013). Within the realms of scaled tennis equipment programming the constraints of the ball, racquet, and courts are available to the coach to manipulate and achieve success. Additionally, the task that the coach presents to his/her students is also available in the constraints-based approach to adapt and refine to achieve success. The non-scaled equipment has limited ability to achieve this degree of success for young beginner tennis players.



Large proportions of 10-and-under players learn the game of tennis from a coach in an individual or group format. The purpose of early involvement of a coach is primarily because parents have not played tennis themselves (Pankhurst & Collins, 2015). Changes in modified tennis equipment is relatively a new concept to most parents. Nations that have adopted scaled tennis equipment recently in their programming have received resistance because coaches who played did not use scaled equipment (Pankhurst, 2016). This attitude of resistance instigated this researcher's motivation and related to this study's problem statement and aims to investigate coaches' perceptions of scaled equipment in tennis.

Further to this resistance, large numbers of coach education programs have been slow to adopt new teaching strategies to their courses, resulting in a lack of information for coaches to follow in their daily programming involving 10-and-under players (Pankhurst, 2016). Additionally, the information related to 10-and-under children's physical, physiological, mental, and social development has only recently been incorporated into coach education opportunities. Lastly, Malina (2008a) stated that the learning and teaching of skills are influenced by the selection and introduction of a strategy and technique of instruction to athletes.

Taking this concept further, coach behaviour and working practices with 10-and-under children, teenagers, or adults should adopt different teaching strategies as they have different needs and abilities. Therefore, it becomes essential for coaches to install appropriate and different environments (Vickers, 2008) to 10-and-under children for the following reasons:

- It is known that children like to have fun and be in the presence of adults;
- Coaches need to make frequent changes in activities to keep children engaged;
- Children learn predominantly through copying visually; and
- Children like to be around their friends, even though their friends might be differently skilled than them.

Therefore, coaches need to create a fun, non-threatening environment and have a range and variety of ideas that use visual stimuli. It is recommended that coaches teach their children to be active and limit the amount of verbal information that they provide (Kluka, 1999). For many coaches who have trained older children and adults, creating these different learning environments where 10-and-under children also learn skills through play by trial and error is challenging but not impossible. Many coaches still organize children in lines and feeding them balls to hit. Children like to move, and tennis is a game of movement while using a variety of different skills in a dynamic environment. Standing in lines and hitting a ball occasionally is not enjoyable or relevant for a 10-and-under child (Pankhurst, 2016).

From a coach education perspective, coaches need to know how to organize and develop programs, lesson content and lesson frequency are specific to 10-and-under children. Studies (Bompa, 2000; Balyi et al., 2013) recommended that the amount of physical activity done by 10-and-under children should be proportionately less than it is for older children and adults. Additionally, studies (Cote, Baker, & Abernethy, 2007; Balyi et al., 2013), emphasized the need for young athletes to play a variety of sports and not to focus on just one sport. The purpose behind this stems from a perspective that basic motor skills and experiences could be developed to serve as a foundation for tennis-specific skills. Some children by the age

of eight or nine show some interest in specializing in sport (Balyi et al., 2013).

National Federations Age recommendations per stage			
National Federation	Red Stage	Orange Stage	Green Stage
Tennis Canada	5-7	7-9	9-10
Tennis Australia	5-7	8-10	9-10
ITF	5-7	8-10	9-10
USTA	6-8	7-10	9-10
British LTA	5-8	8-9	9-10

Table 2. Summary of age recommendations for scaled tennis equipment stages (ITF, 2012b).

From a tennis perspective, using modified equipment can help children advance skills at a younger age and become successful, equally, due to these initial successes coaches encourage more training and competition (Farrow & Reid, 2010). All stakeholders (coaches, parents, and sports organizations) need to be aware and cognizant of ramifications specializing in tennis at an early age (Farrow & Reid, 2010).



Figure 1. Path of progress for transition in 10 and Under Tennis.

METHOD

The underlying design of this research is descriptive. The research was approached from a qualitative perspective as the perceptions of coaches in tennis about the use of scaled equipment has been evaluated.

Coaches were identified from their experience in scaled tennis equipment delivery. Coaches can provide excellent data as they can coach players of all three stages of red, orange, and green at the same time. They can also give appropriate feedback on certain aspects that they have seen contribute to the players being successful or unsuccessful for each stage.

Twenty coaches were invited to take part in personal interviews and answer a set number of questions and their data collected

and analyzed. An almost even distribution of male and female was obtained with twelve males and eight females' coaches taking part. The coaches chosen to be interviewed proved to be phenomenal samples as the average years of experience in coaching was 23 years and in scaled tennis equipment was 11.9 years.

RESULTS

The main data gleaned from coaches on how to navigate the three stages to arrive at non-scaled tennis equipment points towards making sure the right skill development is acquired before making the next step. Also, feedback was given that this transition should not be done by age but by skill development. The reason behind this was that players develop at differing rates. As figure 1 shows, when players make transitions from one stage to the next, there is a dip in playing level. Should that skill development or competency not be attained, that dip could be exaggerated and, therefore, put players at risk of success.

Through the process of interviewing all coaches and asking them a set number of questions with follow up questions to gather further insight the following reoccurring perceptions were identified and are listed in a hierarchical order:

- Perception 1: Coaches like to coach using the constraints-based coach to promote success with their players;
- Perception 2: Scaled tennis equipment competition should conform to skill development, and not age;
- Perception 3: Coaches like to demonstrate their activities to their players when introducing training activities;
- Perception 4: Coaches approaches in scaled tennis equipment are the same as non-scaled tennis equipment coaching;
- Perception 5: Coaches are very positive in their perception of a scaled tennis equipment program;
- Perception 6: Coaches like to use the cooperative teaching style when coaching their players using scaled tennis equipment;
- Perception 7: Coaches like to change the activities to keep their players engaged in practices; and
- Perception 8: More team play is required for players participating in scaled tennis equipment program;

DISCUSSION

Coaches, as one of the stakeholder groups, have a crucial role in how they utilize scaled tennis equipment programming. In trying to attract and retain players in their program, they have adopted some best practices that other facilities and coaches could learn from.

To summarize, they included:

- Adoption of a cooperative teaching style;
- Constraints-based approach to promote success;
- Demonstration of their activities;
- Adaptation of their activities to keep players engaged;
- Competition to promote more team play; and
- Skill development over age when moving up a stage.

These above perceptions are positive findings that refers to the multiple facets of how to teach, engage players, transition between stages, and provide competitive formats.

CONCLUSION

Through the lens of the coach using scaled tennis equipment is a valuable tool to engage and facilitate skill development. Using the teach methodologies of cooperative teaching style, demonstrating of activities, and constraints based approach are in line with recommended strategies teaching youth. Using scaled tennis equipment however, seems to promote these coaching behaviours. Interesting comments are made by the coaches when it comes to moving between the stages of a scaled tennis equipment program. They suggest using skill development as a guidance and not age. This is contradictory on how nations have positioned their competitive pathway. In order to assist the coach in making sure their players are moving up a stage according to a skill development competence and not a competitive competence National Tennis Federations should consider an evaluation of their competitive pathway involved the red, orange, and green stages of a modified equipment program.

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