



Competition-Coaching Introduction L2T

Step 1:

Introduction and setting the scene



Reference Material for Dryland Workshop



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1.1 Introduction

1.1.1 Purpose of Document

This document, your Learning to Train (Dryland) Reference Material, has been developed to expand your knowledge of key coaching topics and is directed primarily at supporting you in your role as a coach working with children in the Learning to Train stage of development.

A copy of this document is provided along with your Learning to Train (Dryland) Coach Workbook when you register for a CCC Learning to Train (Dryland) workshop.

1.1.2 NCCP Core Competencies

As you progress through this workshop, you will work on developing *five core competencies* that will help you become a more effective coach and have a more meaningful impact on the experience of your athletes. The competencies are problem-solving, valuing, critical thinking, leadership and interaction. Here are just some of the ways these competencies come into play:

Problem-Solving

Develop ways of dealing with common situations where nutrition before, during and after training or competition may affect performance.

- Provide basic answers to common questions athletes and parents have about sport nutrition.
- Develop strategies aimed at influencing parents and athletes about basic nutritional choices.
- Determine the structure of a program and the appropriate ratio of training to competition.
- □ Identify options to enhance a program.
- Develop an initial practice plan and progressively modify it as new knowledge is acquired.
- Determine an appropriate structure for a practice.
- Design activities that develop both technical skills and athletic abilities.

Valuing

- Appreciate the need for a long-term approach to athlete development.
- Appreciate how a structured and organized practice promotes learning.
- Appreciate the need to consider potential risk factors when planning practice activities.
- □ Ensure that activities respect growth and development characteristics.
- Ensure that the role of competitions is consistent with the long-term approach to athlete development.

Consider and value the key role that parents play in influencing their child's nutritional choices and behaviours without passing judgement.

Critical Thinking

- Compare the structure and key features of a program with recommendations aimed at promoting athletes' long-term development.
- Identify specific actions needed to better align a program with the guidelines recommended for long-term athlete development.
- Establish linkages between program priorities and practice planning.
- Develop nutritional strategies and provide advice that reflects the realities of athletes' families.
- Compare current knowledge, skills, and attitudes with the information provided in the Reference Material.

Leadership

- Formulate a vision for a club program that promotes long-term athlete development.
- Develop strategies to manage time and resources, given the need for a long-term approach to athlete development.
- Develop strategies and key messages that influence the nutrition decisions that athletes and their parents make.

Interaction

- Brainstorm with other coaches to develop strategies and plans for having a positive effect on long-term athlete development.
- Brainstorm with other coaches to solve nutritional problems and develop plans.
- Work with other coaches to design activities that develop both technical skills and athletic abilities.

Learning Outcomes

After finishing this workshop:

- You will better understand your own motivation for coaching and others' expectations of you as a coach. This involves:
- ✓ understanding your starting point,
- ✓ understanding why people are involved in sport, and
- ✓ understanding others' expectations of you as a coach.
- You will know how to design a basic sport program that meets the training and competition needs of your athletes. In particular, you will be able to:

- ✓ develop a program structure based on opportunities for training and competition,
- ✓ establish indicators of athlete development in your program, and
- ✓ develop practice plans that reflect seasonal training priorities.
- You will have a better understanding of basic sport nutrition and the steps you can take to help your athletes maintain good dietary habits. In particular, you will be able to:
- ✓ provide guidance to athletes or parents on pre-competition nutrition,
- ✓ provide guidance to athletes or parents on post-competition nutrition,
- ✓ take appropriate measures to ensure that athletes stay hydrated during training and competition, and
- \checkmark educate athletes about the use of nutritional supplements.
- You will know how to plan safe, fun practices that meet your athletes' needs and reflects CCC`s Long-Term Athlete Development Model. In particular you will be able to:
- \checkmark explain the importance of logistics in the development of a practice plan,
- \checkmark establish an appropriate structure for your practices, and
- ✓ identify appropriate activities for each part of the practice.

1.2 Coaching Tips for the Learning to Train (L2T) Stage of Development

The following sections (1.2 and 1.3) complement the information provided in section 8 of your Introduction to Community Coaching Reference Material and section 1 of your Community Coaching Reference Material.

1.2.1 Reasons for Athletes Being in Sport

Children come into a sport situation with their own needs, interests and reasons for being involved. Some athletes spend more time with their coach than they do with a teacher, or even their parents. Because of the significant influence coaches have on the development of athletes, both from an athletic and human point of view, they must seek to identify if the reasons why they are coaching are consistent with what athletes want or need.

This section provides an overview of the main reasons why children are involved in sport, and of certain expectations athletes and parents may have of sport and of coaches. Coaches must recognize and respect individual differences in this area because athletes drop out when programs do not match their reasons for being in sport. In other words, coaches need to be fair to athletes — *either work to give them the program they want OR recommend a program that will better meet their needs.*

In general, children participate in sport for one or more of the following four reasons:

- 1) A desire for achievement a wish to improve, master new skills and pursue excellence.
- 2) A need for affiliation a desire to have positive and friendly relations with others.
- **3)** A desire for sensation a desire to experience the sights, sounds and physical feelings surrounding a sport or the excitement in a sport.
- 4) A desire for self-direction a wish to feel a sense of control, to feel in charge.

Achievement-Motivated Participants

You can enhance athletes' motivation to improve and to stay in sport programs by providing personal experiences of success. One way of doing this is to set realistic, progressive goals based on past performances. Athletes then see their progress as they strive to improve.

Here are a few more ideas for making sure that athletes' needs for achievement are fulfilled:

- Depint out individual improvement.
- Keep written records of progress in diaries, logs, etc.
- Schedule games or meets with suitable opponents.
- Meet regularly to discuss progress and reevaluate goals.

Affiliation-Motivated Participants

The affiliation motive – the wish to be part of a group and feel accepted by it – is probably the strongest and most common motive for continued participation in sport.

Working as a unit, setting goals together, having fun with others, feeling appreciated by a group and sharing with others can all help satisfy the desire for meaningful interaction.

Here are a few suggestions for making sure that the need for affiliation is satisfied:

- □ Make interaction with others a part of each practice; for example, have athletes do partner drills, encourage partner stretching or have athletes coach each other.
- □ Have team talks after each practice. Keep these talks informal, and encourage athletes to be open and honest.
- Provide opportunities for social get-togethers after games or meets.
- Encourage athletes to help one another and to do things together.
- Have team parties.
- **□** Remind athletes that everyone is a valued member of the team.

Sensation-Motivated Participants

Experiences that excite the senses – for example, the sights and smells along a beautiful country trail, the feeling of being fit, the desire to move and be active and the excitement of sport itself – can be very important motivators. Here are a few tips on fulfilling athletes' needs in this area:

- Try to arrange workouts in areas with pleasant sights, sounds, smells and physical feelings.
- □ Have athletes warm up to music.
- Provide enough activity for everyone not too much, not too little.
- Break monotony regularly with fun or novelty events.
- □ Vary workouts change the normal routines.
- Let athletes work on exciting new moves.
- □ Set up games and interesting challenges.

Self-Direction-Motivated Participants

Sport gives children a rare opportunity to make decisions about what they are going to do – and to deal with the consequences in a non-threatening situation. There are many things you can do to assist those motivated by self-direction. For example, you can let athletes make up their own routines, moves or plays; assess their own progress; set and adjust their own goals; or decide what play to run in a game.

In general, letting athletes make their own decisions builds greater commitment – and so increases motivation. The following pointers should help you satisfy athletes' needs for self- direction:

Put athletes in positions of leadership. Have them lead warm-ups, choose drills to develop certain skills, etc.

- Give athletes chances during practices or competitions to make their own decisions about what strategy to use (what warm-up routine to use, what wax to use, etc.).
- □ Above all, let athletes make decisions when it really matters when decisions will affect outcomes or when parents and friends are observing, for example. This approach helps athletes learn to enjoy competition, and it encourages their development as true competitors.

1.2.2 Reasons for Athletes Being Involved in Cross-Country Skiing

During the 1999 Hovedlandsrennet (an open Norwegian cross-country ski championship for skiers fourteen and fifteen years of age), the organizing club, in cooperation with the Norwegian Ski Association, conducted a survey to see what the participants thought about the sport. 249 skiers responded to the questionnaire. Norway's large skier population permits meaningful studies on skier development, and the results of this survey make for interesting reading. Highlights from the study are summarized below.

What is Happening to Junior Skiers?

- □ Friends (one in three) and parents (one in six) were identified as the most important reasons why children begin cross-country skiing.<
- □ A positive, fun club environment was identified as an important element if children are to continue skiing.
- Very few of the respondents lived near a ski area that had direct access to good snow conditions. Seven out of ten said they had to travel by car or train to get on snow. The average round-trip to get to snow took 46 minutes, and this was done an average of four times a week.
- Most on-snow training occurred on groomed tracks at a location that had lit trails and a club warming hut.
- Almost 55% trained together with others in their club, but 26.6% trained alone especially those from smaller clubs/communities. 19% trained together with skiers from nearby clubs.
- Over half participated in their first race before they turned nine, and nine out of 10 had raced by the time they turned ten.
- □ Many children leave the sport beginning at 12 years of age.
- Most children quit the sport because (1) it takes too much time, or (2) they have not met the goals they set for themselves – the gap between their own expectations and their results was too great! The study showed that most of the respondents (who were still skiing) had set realistic goals for themselves.
- According to the survey, over 80% of this age group participated in other sports in addition to cross-country skiing.
- 90% took part in more than 10 races each year, and an average of four races outside their home province.
- □ The total training volume averaged 248 hours/year, which is an average of 5.5 hours each week throughout the whole year, or 45 minutes a day.
- Most ski clubs provided two or three workouts per week for this age group during the fall. Skiers did an average of 2.7 workouts on their own.

- Almost 60% of the respondents kept a training log.
- □ The main reasons to continue skiing were:
 - ✓ To improve 28.5%.
 - ✓ Belief that they could be successful -18.6%.
 - \checkmark Simply to push themselves to stay in good shape (they just liked training) 15%.
- Most respondents (90%) were pleased with how their clubs supported their participation in the sport.

1.2.3 Functions and Tasks as a Coach

This section outlines key functions that coaches will likely be responsible for when they work with athletes in the L2T stage of development.

My Coaching Situation

- Coordinate with the other coaches in the club to ensure a vertically integrated and seamless progression of opportunities for all the athletes in the program.
- Coordinate with regional and/or provincial cross-country ski programs to ensure an integrated and seamless regional and provincial sport system.
- Determine a plan for the season for my group that reflects the vision and philosophy of the overall club program.
- Determine the objectives of the practice sessions and/or activities.
- □ Put together a plan for the practice sessions and special activities.
- □ Put together a plan for a series of practice sessions and special activities.
- Determine a plan for recruiting and mentoring developing coaches to work with L2T athletes.
- □ Plan for and lead parents meetings as appropriate.
- Plan for and lead meetings of the support team coaches and other volunteers (my helpers!).
- □ Evaluate the impact and effectiveness of the program for which I am responsible.

Managing the Program: In My Coaching Situation, I...

- □ Arrange for appropriate grooming and track setting for practice sessions.
- □ Keep relevant medical information and emergency contact information for each athlete.
- Keep an inventory of team equipment and waxes.
- Ensure there is appropriate social time built into the program.
- Manage the equipment and waxes.
- □ Manage the team uniforms.
- Coordinate or oversee the coordination of transportation to/from competitions and special activities.

- □ Interact with parents.
- Interact with other coaches, volunteers and assistants.
- Interact with officials at competitions.
- Recruit athletes for the program.
- □ Recruit and train the support team (coaches and other volunteers).

Support to Athletes in Competitive Experiences: In My Coaching Situation, I...

- Determine appropriate competitive events for the development of each athlete.
- Ensure accommodations are booked or billets coordinated for my team if the location of the competition requires an overnight stay.
- Ensure my athletes are all registered correctly for their events before the registration deadline, and all requirements regarding waiver forms are met.
- □ Make sure facilities and equipment are safe.
- □ Supervise physical and mental preparation before competition (warm-up).
- Manage the athletes at the competition.
- Keep the athletes focused on the task.
- □ Manage the parents and assistant coaches involved with your team at the event.
- □ Make sure the athletes have appropriate equipment for the competition.
- □ Make sure the athletes have appropriate clothing for the weather conditions.
- Ensure the ski preparation support is appropriate for the event.
- □ Make frequent adjustments to meet the needs of unexpected situations.
- □ Support to Athletes in Fitness and Skill Development: In My Coaching Situation, I ...
- Ensure the environment is safe and appropriate, and make adjustments as trail and weather conditions dictate.
- Get the ski area and any necessary equipment ready for the activity.
- Ensure that the athletes are notified of what is needed in advance so that they bring appropriate ski equipment and clothing.
- □ Assist with ski preparation as necessary.
- Motivate the athletes to practise and learn.
- Ensure the fitness and skill development activities are appropriate for the athletes.
- Adjust instructions to meet the needs of the athletes.
- □ Analyze technical errors/problems.
- Recommend corrective measures.
- Give feedback to athletes.
- Direct/supervise warm-up activities.
- Coordinate activities to develop team spirit.
- Teach basic techniques and technical progressions.
- Teach basic tactics for competitions.

- Demonstrate technical skills.
- □ Analyze and keep track of the athletes' performance (progress in learning a skill, etc).
- □ Teach the rules of cross-country skiing.
- Administer basic first aid as needed.

Social Support to Athletes: In My Coaching Situation, I...

- □ Teach values through sport.
- Develop activities to improve self-esteem.
- □ Speak to each athlete individually at least once during a practice.
- Listen to athletes.
- □ Motivate athletes to learn.
- □ Encourage athletes to develop an appropriate work ethic.
- Develop athlete self-reliance and independence.
- □ Help develop an athlete's self-esteem.
- □ Have a positive influence on team spirit.
- Dependence of the second secon
- Manage conflict.
- Encourage the athletes to persevere.
- □ Advise parents about their involvement.
- **D** Promote further participation in sport.
- Ensure activities are fun.
- □ Ensure all participants are given the opportunity for equal involvement.
- Give equal time to all athletes.
- Drganize/coordinate recognition/awards ceremonies/social activities.

1.3 The Parent/Coach Relationship

Parents play a key role in the sport experience of athletes. In many cases, it is the parents who initiate the child's involvement in sport. As a result, coach-parent relationships also have a major effect — positive and negative — on athletes' experience in sport. It is therefore important for you to:

- Develop positive and meaningful relationships with athletes' parents.
- □ Seek to influence parents and guide them so that they can have a positive and supportive influence on their child's sport experience.

Here are some suggestions for how to develop such relationships:

- Organize a formal meeting with parents to discuss the objectives of your program and your approach to coaching. Information to help you is provided in section 8 of your Introduction to Community Coaching Reference Material and at the end of this section.
- Describe to parents in detail the behaviour you will be reinforcing in athletes. For example, if you plan to emphasize self-reliance, or reward effort rather than performance, let parents know.
- Explain to parents the support you expect from them. For instance, make it clear that you expect them to bring their children to practice sessions on time and to provide their child with ski equipment that will allow them to learn sport skills that are appropriate for their age.
- Recognize the need for regular, open communication. Since misunderstandings between coaches and parents are usually the result of poor communication, it's important to figure out what works effectively with the parents of your athletes. Use as many different methods as you can, such as letters to parents at the beginning of the season (refer to section 1.3.1), parent meetings, parent questionnaires (refer to section 1.3.2), small group conversations, talks on the telephone, personal notes and club/team newsletters. If you depend on e-mail or your web site only, you may not be communicating as effectively as possible.
- Be positive and open about feedback it will build parents' trust in you and lead to an even better program.

Why Educate Parents?

As you begin a season, plan how you are going to educate the parents of your athletes. This will add to your work load initially, but in the end it will make your job easier. The vast majority of parents will want to be supportive of their children and some of them will want to have a meaningful role in your club as well. They love and support their children, pay the bills, drive their athletes to practices/competitions, feed, clothe and house them. With some encouragement and guidance they may also become involved in governance, fundraising, social activities, organizing competitions and so on. In the end, investing time in educating the parents will increase support for you as a coach and for your program as a whole.

1.3.1 Sample Letter to Parents

Example of a letter to parents at the beginning of the season:

Dear Parents,

I am pleased to be contacting you for the first time this season. During the season, I will have the opportunity to spend many hours with your son/daughter and I hope that you and I will have the chance to meet on a regular basis also. On this occasion I am writing to invite you to an important parent information meeting that will take place at:

Location: _____ Date: _____ Time: _____ (AM or PM).

This meeting will last approximately one hour. If you have any specific questions that are not covered during the meeting and that you wish to discuss with me, please feel welcome to talk to me immediately afterwards. The agenda for the meeting will be as follows:

- □ The objectives of the program:
 - ✓ Our philosophy and program objectives.
- The overall plan for this season:
 - ✓ What special activities (ski tournaments, races, backwoods tours) are scheduled, and the dates.
 - ✓ The clothing and equipment your child will need.
 - ✓ Transportation.
 - ✓ The cost per child/payment deadlines.
 - Christmas and other family vacations, anticipated absences, athlete involvement in other sports/activities.
 - ✓ Expectations of parents.
- **Question period.**

It is important for our team organizers and coaches to be aware of what your expectations are as parents. For that reason I am requesting that you take a few minutes with your son/daughter to complete the attached questionnaire. Your comments will help us build an honest and open relationship as well as help us align our goals and expectations for the program with the goals and expectations you and your child have.

Team Leaders:	Contacts:	The best time to reach me is:
SDP Programmer: Coach: Assistant Coach:	name, phone, e-mail name, phone, e-mail name, phone, e-mail	

If you are unable to attend I would encourage you to get in touch with me prior to the

meeting.

Signature: _____

1.3.2 Sample Pre-Season Questionnaire for Parents

What are your reasons for enrolling your child in an organized cross-country ski program (i.e. Track Attack)?

What are your expectations of the program leaders, and specifically of the coaches?

In your opinion, what goals should be set for the team by the team leaders?

Identify values that you think should be promoted by the program.

List important facts about your child that team leaders should know about (e.g. allergies, health issues, previous injuries, etc.).

Please return the questionnaire to

at_____by _____

at least one week before the first parents' meeting.

Participant's name

Parent/guardian's name

Date___/___(dd/mm/yyyy)

1.3.3 Parents' Rights

To create an optimal environment for your program, you first need to make the decision that you will not view the parents as the enemy, but the "good guys." You must be willing to work directly with them and be open in your interactions. Keep in mind that parents may not understand the sport, but they do have rights, and their questions may be reasonable and important from their perspective. Always take a professional position - even when you are being challenged. To help you do this you might want to keep in mind the following "Parents' Rights":

- 1) To know your training, background and coaching experience. Parents have a right to know your NCCP certification level, technical expertise and experience in the sport. They also have a right to know where you have been before and what other clubs/athletes you have coached.
- 2) To know their child will be safe. Parents have a right and an obligation to ensure that their child will be both physically and emotionally safe with you. They have a right to be reassured that their child will not suffer physical or emotional abuse, and questions along these lines must be handled sensitively by the coach.
- 3) To know your coaching philosophy, views on competition and program structure. Parents have a right to know what your program entails and how it will run. They also have a right to know your beliefs about teaching, competing, winning, what it takes to be successful, etc. The more clearly these positions are spelled out, the smoother your program will run.
- 4) To know their child will be treated equally with the other athletes in the program. Parents have a right to expect you to be equally interested in all the athletes enrolled in your program. Coaches who treat athletes preferentially according to their ability undermine the team environment and contribute to premature dropout from the sport.
- **5)** To know you will deal with them in an open and honest manner. It is reasonable for parents to assume that you will be honest and trustworthy in your dealings with both the athletes and them. This is a reasonable expectation considering they are entrusting you with their children.
- 6) To know you will conduct yourself in a professional manner. Parents expect you to present yourself professionally when dealing with their children and themselves. They expect you to set appropriate standards for athlete behaviour, and to enforce appropriate boundaries. They also expect you to act professionally at practices, competitions and in all other coaching-related situations.
- 7) To know you will listen to appropriate concerns and be responsive. A parent should be able to approach you with a legitimate and appropriate complaint, have you listen considerately to their concerns, and have you take reasonable action to address the problem. They should receive an open and non-defensive response.
- 8) To know you will make an effort to know your athletes individually and treat them with respect and dignity. Good coaches do just this! Parents are delighted with coaches who take the time to get to know their child as an individual.

- 9) To know their child will learn, improve and have fun cross-country skiing. Sport is supposed to be rewarding and fun. Parents are investing their time and money for their child to grow and develop as a person and an athlete. These are appropriate expectations. If the athlete is unhappy, or is struggling to acquire a skill, it is reasonable for the parent to approach you about it.
- **10) To know you will not collude with destructive peer group behaviour.** Parents expect that you will deal promptly with negative social interactions such as scapegoating, ostracism and other demeaning behaviors, and that you will not condone or turn your back on them.

1.3.4 Getting Parents to Work With You

As a coach you are in a position to give parents two things that they want very much, and that frequently causes them to say and do unhelpful things:

- □ They want their child to be happy; and
- □ They want their child to be successful.

Parents who cause problems for you may do so because they don't understand the sport (or sport in general), they don't know how to be helpful and they don't understand the effect their behaviour has on you and their child. Following is a list of strategies and ideas that can help you persuade all of your athletes' parents to work with you:

- Help parents redefine what it means to be a winner. Teach them that winning is not about coming in first. It is about the athlete pushing their OWN limits and constantly striving to do better than their best. They are winners if they give a full effort, even if they don't win the competition or achieve the goals their parents or others have set for them.
- Help parents to refocus. All too often parents influence their children to concern themselves with things that are beyond their control – such as the competition, their skis, the weather, the snow conditions, the officiating, etc. Teach parents that focusing on challenges the athlete cannot control will lead the athlete into problems with their performance. Instead the athletes should be encouraged to focus on what they can control, which is themselves.
- Help parents redefine competition. Teach them that it is not appropriate to distract the athlete with thoughts of beating someone else. The competition is the athletes' partner but their real challenge lies within themselves. Help the parents to understand that athletes focusing excessively on the competition usually results in performance problems. Educate them to encourage their children to compete against themselves
- Don't use a crisis intervention model when dealing with parents don't wait for a situation where problems and emotions have surfaced before dealing with a problem. Use a PREVENTATIVE model and commit yourself to training parents from the first day they are involved with your program. Pro-actively educate them with verbal and written material.
- □ Communicate. Keep the lines of communication open between yourself and the parents of your athletes. Be approachable. Encourage them to bring their problems to

you directly. Listen to them and give them the feeling that you hear them and can understand where they are coming from, even if you don't agree with them.

- □ Act professionally at all times. Do not become emotional when handling problem athletes, or responding to problem parents. Keep control of yourself when they push your buttons. If you are unable to maintain a professional approach, you will not be effective.
- Educate parents about the CCC Long-Term Athlete Development Model. Explain to them the long-term process their child is involved in and the proper way to measure their success.

1.4 Glossary of Terms

- □ Adaptation refers to a response to a stimulus or a series of stimuli that induces functional and/or morphological changes in the organism. Naturally, the level or degree of adaptation is dependent upon the genetic endowment of an individual.
- □ Aerobic Capacity (for the purposes of this document) may be thought of as synonymous with aerobic endurance. That is, the ability to perform without decrement in performance over tens of minutes with the energy contribution being almost exclusively aerobic as the time of the effort/performance increases.
- □ Aerobic Endurance is the body's ability to exercise whole muscle groups over an extended period of time at moderate intensity, using aerobic energy. Your aerobic system uses oxygen to break down carbohydrates and convert them into lasting energy
- Aerobic Stamina is the ability to sustain a dynamic effort over an extended period of time (normally, efforts lasting several minutes or even hours). Note: intense efforts lasting between two and 10 minutes require a subset of this athletic ability referred to as maximum aerobic power.
- Aerobic Power refers to the maximal rate at which the aerobic system can contribute to energy production. Therefore, this will tend to influence maximal effort events or repetitions lasting in the range of two to eight minutes. It should be realized that "anaerobic" processes are heavily involved in such power outputs/performance levels.
- Agility is the ability to execute movements or to move rapidly, with precision and with ease.
- □ Anaerobic Capacity (following the pattern of terms above) is concerned with the ability of the various anaerobic metabolic pathways (predominantly the anaerobic glycolytic or anaerobic lactate system) to produce high power outputs in the 45 second to two minute range.
- Anaerobic Power (for the purposes of this document) emphasizes the ability of the anaerobic glycolytic system to produce high, but short duration (approximately 8 45 seconds) power outputs. In addition to this aspect is the ability of the anaerobic alactate system (ATP-CP), which is able to utilize immediately available energy stores for explosive and/or ultimate speed (i.e. 0 8 second durations) actions.
- Balance is the ability to achieve and maintain stability. There are three types of balance:
 - ✓ static balance adopting a controlled body position in a stable environment;
 - ✓ dynamic balance maintaining control during movement or stabilizing the body by performing muscular contractions to offset the effect of an external force; and
 - ✓ the ability to keep an object or another body under control either in a static or a dynamic manner.
- □ Chronological Age refers to the number of years and days elapsed since birth. Growth, development and maturation operate in a time framework - that is, the child's chronological age. Children of the same chronological age can differ by several years in their level or biological maturation. The integrated nature of growth and maturation is achieved by the interaction of genes, hormones, nutrients and the physical and psychosocial environments in which the individual lives. The complex interaction regulates the child's growth, neuromuscular maturation, sexual maturation and general physical metamorphosis during the first two decades of life.

- Closed Skill refers to a skill that takes place in a stable, predictable environment by a performer who knows exactly what to do and when. A closed skill is therefore not affected by the environment and tends to be habitual. Movements follow set patterns, have a clear beginning and end, and tend to be self-paced e.g. a free throw in basketball or a serve in squash or tennis.
- **Continuous Skill** refers to a skill that has no particular beginning or end and lasts for many minutes e.g. swimming or riding a bicycle.
- **Coordination** is the ability to perform movements in the correct order and with the right timing.
- Cyclical Sport is one in which a movement is repeated over and over e.g. swimming or running.
- Discrete Skill refers to a skill that features an easily defined beginning and end, and is usually of brief duration e.g. throwing a ball.
- Developmental Age refers to the interrelationship between growth and maturation in relation to the passage of time. The concept of development also includes the social, emotional, intellectual and motor realms of the child. Developmental age reflects the true overall situation of an individual's growth and maturation and may be thought of as an index of development stated as the age in years of an individual and determined by specified standardized measurements such as motor and mental tests and body measurements. The terms "growth" and "maturation" are often used together and sometimes synonymously. However, each refers to specific biological activities. Growth refers to observable, step-by- step, measurable changes in body size such as height, weight and percentage of body fat. Maturation refers to qualitative system changes, both structural and functional in nature, in the organism's progress toward maturity e.g. the change of cartilage to bone in the skeleton.
- Flexibility is the ability to perform movements of large amplitude about a joint without sustaining injury.
- Maximum Aerobic Power (MAP) is the highest work rate or power output at which energy can be produced aerobically. MAP is determined by two factors: VO2max and mechanical efficiency. Under normal conditions, an intensity of 100% of MAP can be sustained for approximately six to eight minutes.
- Maximal Oxygen Consumption (VO2max) is the highest amount of oxygen that can be used by the body to produce energy when performing a particular form of exercise at maximal intensity.
- Maximum Speed is the highest rate at which a movement or a series of movements can be executed, or the ability to cover a given distance in the shortest possible time during an all-out effort of very short duration (eight seconds or less).
- □ **Maximum Strength** is the highest level of tension generated by a muscle or muscle group during a maximum contraction, regardless of the duration of the contraction.
- □ Open Skill refers to a skill that is performed in an environment that is constantly changing and in which movements must be continually adapted. An open skill is predominantly perceptual and mostly externally paced e.g. a pass in football. Sports such as netball, football and hockey usually involve open skills.
- **Overload** is making the training harder than the body is used to. In doing so, the body adapts and becomes stronger, faster, etc.
- Peak Height Velocity (PHV) is the maximum rate of growth in stature during the adolescent growth spurt. The age of maximum velocity of growth is called the age at

PHV. The rate of change in height varies through specific stages of growth and allows for "height cues" or rates of growth changes to be used as potential indicators of appropriate programming and evaluation content for developing athletes.

- Physical Literacy refers to the mastering of fundamental motor skills and fundamental sport skills.
- Practice:
 - Part Practice is a learning technique in which the task is broken down into parts for separate practice.
 - ✓ Variable Practice is a practice in which varying learning conditions are used e.g. in baseball, hitting random pitches (fastball, curve, slider) versus hitting only fastballs.
 - Massed Practice is a sequence of practice and rest periods in which the rest time is much less than the practice time.
- □ **Readiness** refers to the child's level of growth, maturity and development, which enables him/her to perform tasks and meet demands through training and competition.
- Specificity is a principle of training according to which adaptations are determined by the nature and magnitude of the training stimulus. This concept implies that, to maximize adaptation, the nature and the conditions of training activities must be designed to replicate closely those encountered in competition. Specificity therefore applies to variables such as type of activity, muscle masses involved, motor pattern, speed of movement, environmental conditions, power output, duration of effort and cognitive and perceptual demands.
- Speed may be thought of as the ability to move a limb, limbs or the whole body at the greatest possible velocity. In addition, speed involves the capability to react to a stimulus or signal (such as a starting signal, stumble or fake/deke) in the shortest possible time. Speed may be incorporated as part of physical training and/or technical training depending upon the stage of development of the athlete or the sport specificity required.
- □ **Speed-Strength** is the ability to perform a muscle contraction or overcome a resistance as fast as possible (normally, very brief efforts of 1-2 second).
- Strength-Endurance is the ability to perform repeated muscle contractions at intensities below maximum strength (normally, 15-30 repetitions or more).
- □ **Training Age** refers to the age where athletes begin planned, regular, serious involvement in training. The tempo of a child's growth has significant implications for athletic training because children who mature at an early age have a major advantage during the Training to Train stage compared to average or later maturers. However, after all athletes have gone through their growth spurt, it is often later maturers who have greater potential to become top athletes provided they experience quality coaching throughout that period.
- Window of Trainability refers to a point in the development of a specific behaviour when an optimal effect on development can be derived from experience or training. The same experience, introduced at an earlier or later time, has no effect on or retards later skill acquisition.

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