

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

**THE PROBLEM AND PROSPECTS OF TIRUNESH DIBABA
ATHLETICS CENTER IN DEVELOPING YOUNG
ATHLETES FOR NATIONAL TEAM**

By

Bewket Ayenew

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Addis Ababa

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DIBABA ATHLETICS CENTER IN DEVELOPING
YOUNG ATHLETES FOR NATIONAL TEAM**

By

BEWKET AYENEW

**A Thesis Submitted to the School of Graduate Studies of Addis Ababa
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BEWKET AYENEW

Approved by board of examiners

Chair Person. Dep. of Graduate Committee

Advisor

Internal Examiner

Signature

Signature

Signature

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LIST OF ACRONYMS

ADI-	Adequate Daily Intakes
ATP-	Adenosine Try Phosphate
COSR -	Centre of Olympic Studies and Research.
COSR -	Centre of Olympic Studies and Research
CP -	Cretin Phosphate
CSF-	Critical Success Factors
EAF-	Ethiopian Athletics Federation
EFSA-	European Food Safety Authority
IAAF –	International Association of Athletics Federation
NRCIM-	National Research Council and Institute of Medicine
NSOs-	National Sport Organizations
RDA-	Recommended Dietary Allowance
TLC-	Teaching, Learning and Competing
WHO -	World Health Organization

ABSTRACT

The main purpose of this study is to investigate the problem and prospects of Tirunesh Dibaba Athletics Center in developing young athletes for the national team.

The sources of data for this study were athletes, coaches and stakeholders. The sources of information for the study were documents, internets, relevant books of IAAF coaching manuals and some important and constructive materials that relates with the topic. Observation, questionnaire, interview and document will be processed to produce percentile tables. One of the focus area in Tirunesh Dibaba athletics center to produce young athletes for national level is selected athletes using talent identification, from project and competition. Providing different education in technical training will help both the trainee and coaches to benefit a lot in advance for the national team. So that coaches can be came familiar with new ideas, rules, method and regulation of coaching to come up with the effectiveness of the center to produce an elite athlete for national team.

CHAPTER ONE

INTRODUCTION

This part deals with background of the study, statement of the problem, objective of the study, significance, delimitation, limitation, operational definition of terms and organization of the study as used in the study.

1.1 BACKGROUND OF THE STUDY

Ethiopia is one of the first few African countries which pioneered modern sports in the continent. More than one hundred traditional sports, which distinctively characterize the cultural aloes and identities of the peoples of Ethiopia, are also practiced beside modern sports.

In the international sports arena, Ethiopia still enjoys reputable achievements owing to its vanguard role which led to the establishments of various continental sport organization. The history of Olympics witness that Ethiopia stood among the first African nations to start participation in the quadrennial Olympiads in which Ethiopia's first time appearance took place in 1948 E.C at the Melbourne Olympiads mainly because of the all time world class performances of its famous distance runners who continuously bring in fame and pride not only to the people of Ethiopia but also to the whole of Africa.

Sport Centers are community-based independent organizations where athletes have access to high level coaching plus a range of sport education and personal development programs.

Sport centers are also centers established to facilitating sportive activities on the basis of national sport policies.

Nowadays the importance of youth sports centers, as a fast track strategy for success has been utterly recognized and hence made operationally across all parts of the world irrespective of the development level of a country.

Sports contribute to individual well being: personal, emotional, physical, social, cultural and academic development. It provides opportunities for leadership skills, constructive outlets and generally enhances individual quality of life.

Nonetheless in order to take full advantage of their potentials and maximize their outputs, the projects should further get adequate capacity building supports particularly in the area of training ground.

Anecdotal evidence suggests that students in Sports centers have better attendance and retention rates than their fellow students. Students who play and train within an Academy are more inclined to continue their studies in order to receive the support, guidance and expertise that the program provides. In most cases, students have to succeed within both their sporting activity and their academic studies in order to stay on the program which assists with both attendance and retention at College. Sport can also bring about unity across a College and contribute to increased satisfaction rates amongst students.

Some sports associations created sports academies so as to help young athletes to better combine their studies with sports training and competition by concentrating as much as possible support services. In some other countries, high level athletes benefit from a specific status. Sport training can be defined as a routine of physical and mental exercise to be carried out in a specific, measurable load to put the body in to a fatigue state from where adaptation commences,(Introduction to coaching the official IAAF guide 2002).

1.2 STATEMENT OF THE PROBLEM

Sport development is “a process whereby effective opportunities, processes, systems, and structures are set up to enable youth athletes in all or particular groups and areas to take part in sport to improve their performance to what ever level they desire” (Collins, cited in Eady, 1993)

The potential contribution of sport centers can make to the achievement of young athlete performance.

However, high-performance athletes play a critical role within this context. The Sport for Development includes many high-performance sport federations, teams, and athletes among its advocates and practitioners. By virtue of their achievements and resulting celebrity, elite athletes can serve as powerful role models and highly effective advocates. Athletes can also be remarkably effective in disseminating public health and education messages to hard-to-reach groups.

The field of elite athlete development has been the subject of significant research. Studies have predominantly examined the critical success factors (CSF) of elite performances from a sport science perspective (e.g., Joyner, 1993; Sparling, O'Donnell, & Snow, 1998), or comparisons of countries and their approach to elite development (e.g., Green & Houlihan, 2005). As a result, developing elite athletes is predominately based on fulfilling athletes' needs with a rather scant appreciation of how national sport organizations (NSOs) play a part in that process. My study focuses more on the contribution of sport academy in the development of young athletes for national level.

In order to formulate the problem and prospects of Tirunesh Dibaba Athletics Center for young athletes development the basic research questions are outlined as follows:-

- How the athletic center contribute for young athletes performance development?
- What factors affect for the effectiveness of the center to produce an elite athletes?
- How to create a conducive situation/environment for the training?
- What are the criteria to select young athletes who join the center?
- How to increase the quality of young athletes for national level?

1.3 OBJECTIVE OF THE STUDY

As far as the problem and prospects of Tirunesh Dibaba athletics center in developing young athletes for national team are concerned. Then this study has the following general and specific objectives.

General Objectives

This study is very important to investigate the overall problem and prospects of Tirunesh Dibaba athletics center for young athletes' development. It also investigates how the Ethiopian Athletics Federation (EAF) facilitates trainees to continue and become effective in their regular education besides the sport-training program.

Specific Objectives

The specific objectives of the study are to:

- investigate the problem and prospects of Tirunesh Dibaba athletics center for the development of young athletes.
- identify the target to be considered in sport center for young athletes development.
- identify the challenges of the sport center for their effectiveness.
- make reliable recommendation.

1.4 SIGNIFICANCE OF THE STUDY

Sport Centers are community-based independent organizations where athletes have access to high level coaching plus a range of sport education and personal development programs.

The role of the athletic centers is to provide high quality development opportunities for talented and youth athletes living in Ethiopia. Generally this study intends to assess:-

- the problem and prospects of Tirunesh Dibaba athletics center for the recruit, enroll and train youths from regions and produce highly qualified and competitive elite athletes.
- It also suggests a better way of recruitment and training strategies.
- It can also help as a source of information for an interested candidate who conducted research on similar areas.

1.5 DELIMITATION

The study made its scope and delimited in investigating the problem and prospects of Tirunesh Dibaba national Athletics training center located in Asella.

1.6 LIMITATION

The study focuses on the problem and prospects of Tirunesh Dibaba athletics center in developing young athletes for national level. In doing so, the researcher has come across with the following problems. These includes:- financial problem, as the sport centers are very young in Ethiopia there is shortages of documents that can be used as a source of information and a biased responses from some of the respondents.

1.7 OPERATIONAL DEFINITIONS

The following key terms were used through out this document and to insure clarity of meanings and usages the terms are defined as below.

- **Athlete:** - is a person who trains for performance incensement under the supervision of a coach in a specific club and event.
- **Calories:** - is the energy value of food.
- **Club :-** is an athletic organization that provides training and other benefits for the athlete.
- **Excellence:-** is reaching the top of the pyramid and involves accomplishing nationally and publicly recognized standards of performance.
- **Federation:** - is an organization that governs and directs different athletics clubs.
- **Foundation:-** is the base of the pyramid, and involves the vital first steps of learning basic movement skills.
- **Participation:-** is one level up from the foundation, and involves exercising one's leisure option, taking part in sport for health, fitness, friends and fun.
- **Performance:-** is one level higher than participation and involves the challenge of increasing proficiency by striving to improve personal standards of participation.
- **Sport centers:-** are centers established to facilitating sportive activities on the basis of national sport policies.
- **Sport:-**is all forms of physical activity that contribute to physical fitness, mental wellbeing and social interaction.
- **Training:-** A routine of physical and mental exercise to be carried out in a specific, measurable load to put the body in to a fatigue state from where adaptation commences.
- **Training Centers:-** are any facilities / programmes / equipment dedicated to the training of high performance athletes. They may vary a lot from a country to another and have several forms such as youth elite sports centers, professional clubs training centers, sports academies, etc...
- **Youth:-**are people who have reached the age of majority (usually 18 years).

1.8 ORGANIZATION OF THE STUDY

This part of the study includes five chapters, chapter one deal with background of the study, statement of the problem, objective of the study, significance, delimitation, limitation and operational definition of terms, chapter two deal with literature review, chapter three deal with method and procedure of data, chapter four deal with finding, interpretation and discussions and chapter five deal with summary, conclusion and recommendation used in the study.

CHAPTER TWO

LITERATURE REVIEW

This chapter deals with relevant literature to the professional academy and its program the Benefits of Youth Sport Participation and, Quality criteria related to the youth elite sports training system, coaching philosophy, athlete's development and maturation, sport participation, training principles, periodization and nutrition.

2.1 THE PROFESSIONAL ACADEMY

The professional sports academy plays a key role as a developer of sporting skills on behalf of (a) A professional club, and

(b) A National Governing Body.

As a commercial entity investing in player development the academy has a right to realize the benefits of its investment in terms of access to player services, and has a responsibility to commercial stakeholders to provide a return on investment Centre of Olympic Studies and Research (COSR).

However, particularly in the case of the young sports person the center has the responsibility to ensure that commercial exploitation does not impinge on players' rights in general and in this case on their right to education.

- **Role of training centers**

Training centers play also a very important part in the talent identification. That's especially the case of sports clubs in professional sports, which dedicate a significant part of the budget of their training centers to talent identification

- **Sport program**

Sports programs aimed at reducing youth delinquency work simply by reducing boredom in youth and creating a diversion from less desirable, sometimes criminal, behavior (Morris, Sally

banks, Willis & Makkai, 2003). The majority of sports programs targeted at delinquent youth seek to do one or more of the following:

- divert youth from delinquent others or behaviors
- rehabilitate previous anti-social or delinquent behaviors or
- Hook the target population with sport in order to establish relationships among authority figures, social services, educational programs, and marginalized groups.

Sport-based programs improve the learning performance of children and youth, facilitating educational attainment and encouraging them to stay in school, and those sport-based programs in schools aid in the social development of young people. This relationship is thought of in different ways. In the most basic way, sport participation at a young age helps children to learn physical skills that allow them to stay active later in life (Hedstrom & Gould, 2004).

According to the overview of youth and sport in the U.S the educational benefits are often thought of more broadly, though. Children may learn, or become familiar with, the competitive process and learn to assess their competence in different skills through sport participation (Seefeldt & Ewing, 2002).

Sports participation among children and youth is associated with reduced rates of delinquency. For example, in the overview of youth and sport in the U.S., Seefeldt & Ewing (2002) also summarized social and epidemiological trends in sport participation and youth delinquency. This evidence suggests that sports participants engage in delinquent behavior less often than non-participants (and that this correlation is stronger among youth from lower-class backgrounds) or youth who participate in minor sports. As the authors note, the reason for this negative correlation is unclear.

2.2 THE BENEFITS OF YOUTH SPORT PARTICIPATION

With so many youth participating in sports, either in school or in agency-sponsored programs, it is important to examine the possible benefits of this involvement. However, numerous benefits have been identified. For instance, Seefeldt, Ewing, and Walk (1992) have identified the following possible benefits associated with competition:

- Learning physical skills. Young athletes learn both fundamental motor skill and sport-specific skills that allow them to stay active.
- Appreciation of fitness. Two of the motives for participation identified by children is “to get exercise” and “stay in shape” (Ewing & Seefeldt; 1989); participating in sports offers this benefit.
- Sense of belonging. Another strong motive of participation is social interaction. Sports can provide peer interaction through both teammates and healthy competition (see Weiss & Stuntz, 2004).
- Acquiring sport skills for leisure. Learning the fundamental motor skills through sport can aid in skill development, but can also be transferred to others.

Canadian sport for life resource paper describes, Participation in sport and regular physical activity brings with it a wide-range of physical and psychological benefits for all. In addition to improved health and wellbeing, physical activity is known to protect against cardiovascular disease, obesity, certain cancers and Type 2 diabetes. Regularly active young girls and women also show positive body weight management skills, stronger psychological development, and enhanced physical expertise.

Despite these valuable benefits, there are potential risks associated with sport and physical activity participation. Especially for the young athlete, the risks are often linked with “striving to win at all costs.” Rewards such as winning gold medals, winning a championship, acquiring a scholarship, recruitment, and professional ranking have invoked dangerous strategies that have led to increasing number of injuries and high dropout rates from sport at young ages (13-14 yrs). Sports have been cited as the leading cause of injury and visits to emergency room in adolescents. Injuries are barriers to performance; they may lead to an early exit from sport or contribute to reduced involvement in sport over the short-term and long-term.

Although impossible to avoid all injury, some sport injuries are predictable and potentially preventable. The US Centre for Disease Control and Prevention estimates that one half of all sports injuries in children and adolescents are preventable. Effective injury prevention would minimize disruption in participation and performance and maintain a healthy, lifelong relationship with physical activity.

Participant Development as Talent Development

Sports participation in terms of three primary goals:

- The public health goal;
- The educative goal; and
- The elite-development goal.

Elite-development goals of a junior sport system can be served as part of a comprehensive system and still direct sufficient resources to achieve the educative and public health goals that are more fundamental to the system as a whole'(Siedentop 2002 p.396).

2.3 QUALITY CRITERIA RELATED TO THE YOUTH ELITE SPORTS TRAINING SYSTEM

• Numbers of training centers

Sports organizations may limit the number of young athletes entering their structures. Some sports organizations may even impose a limited number of athletes to sports clubs running their own training centers. Some training centers are trying to limit the number of athletes involved in their training groups in order to reach a higher degree of competition between athletes, to limit costs and to increase the percentage of athletes reaching elite level. Some training centers pursuing the same goal have brought together their means in order to create shared structures.

• Talent identification systems

A National Olympic Committee implemented a talent identification scheme to guide young athletes to develop into the right sport. It is co-ordinate by the Director of Youth, and guided through a number of schools throughout the country. In another European country, each year, all school pupils of 9 years participate in a set of physical tests within their school. Based on their performance, the pupils are offered the opportunity to train with specialized coaches.

In some Member States, and in order to protect the health of young athletes, the training duration is limited through education or labor laws or collective bargaining agreements. It may also be limited by sports associations and some books of specifications. Some countries impose a minimum age at which a youngster can start competition with a national team. In late maturity

sports, most of the training centers understand that it is not necessary (and even non productive) to impose to the athletes to start intensive training at an early age. Some sports associations have set out rules prohibiting clubs to make youngsters move from their region of residence.

2.4 ATHLETE DEVELOPMENT AND MATURATION

The benefits of the coach taking a long term athlete development approach are even greater for our young athletes. The ‘athlete development’ approach closely follows the principal stages of growth and development that characterize the first two decades of life. If a long term approach to training is not adopted for young athletes there is likely to be a plateau in performance when growth and development slows significantly around 18 years of age. This, for some athletes, may result in their performances deteriorating. At this point any earlier short term training approach cannot be reversed - it is now too late. This often leads to drop out from athletics at ages 15-18, before the athlete has achieved anything close to their potential.

It has been said that competitive sport loses as many people as it attracts. The same can be said for the great mass of recreational athletes who are not even in organized training situations. Every person who leaves athletics is a symptom of a recurring cause, an incorrect understanding of the place of competition for novices of any age. It is the altering of developmental training patterns to meet the needs of immediate competition that really causes them to join the many ‘lost athletes’. The effective coach takes the approach of “doing the right thing at the right time” and in doing so helps to retain their athletes in the sport.

Athlete development relates the structure and nature of training to any athlete’s developmental pathway so that individuals are doing the right things at the right time for their long term, not necessarily immediate, development. It is also clearly about knowing the place and relative importance of competition at different stages in an athlete’s development (Introduction to coaching IAAF 2002).

Development of young athletes

The starting age mainly depends on the specific requirements (physical and technical skills) of each sport. Depending on the countries, sports and systems, specific qualifications are or not required for coaches in charge of the training of young athletes. Depending on the countries and

systems, coaches also have the opportunity or the obligation to improve their coaching skills through continuing education programmes. The issue of funding remains a delicate point. In many sports / countries, it is very difficult to grant coaches decent salaries and a satisfying work environment in terms of athletes' security and sports training efficiency.

In a majority of countries, arrangements are made possible so that young athletes can combine sports and school during the compulsory period. According to sports (sports maturity, characteristics of competitions, economy...) and systems (organization of training centers, legal framework, specifications...), young athletes have more or less difficulties to go on with their studies. In most countries, the situation is much more uneasy for athletes who wish to follow higher education as in the case where they should stop their studies during a few years to entirely devote their time to sports training and competition, they will often encounter obstacles to get back to school afterwards.

Sport development is "a process whereby effective opportunities, processes, systems, and structures are set up to enable people in all or particular groups and areas to take part in sport and recreation or to improve their performance to whatever level they desire" (Collins, cited in Eady, 1993, p. 8). Previous efforts to depict sport development opportunities resulted in a sport development metaphor, the participation pyramid. The base of the pyramid represents mass participation and the top elite participation. The sport development pyramid is not an empirically derived model. It has shaped the thinking, conceptualizing, and planning for sport development in various countries.

The Sport Development Metaphor

Traditionally, various versions of the sport development pyramid have focused on the relationship between mass and elite participation (Eady, 1993, p. 14).

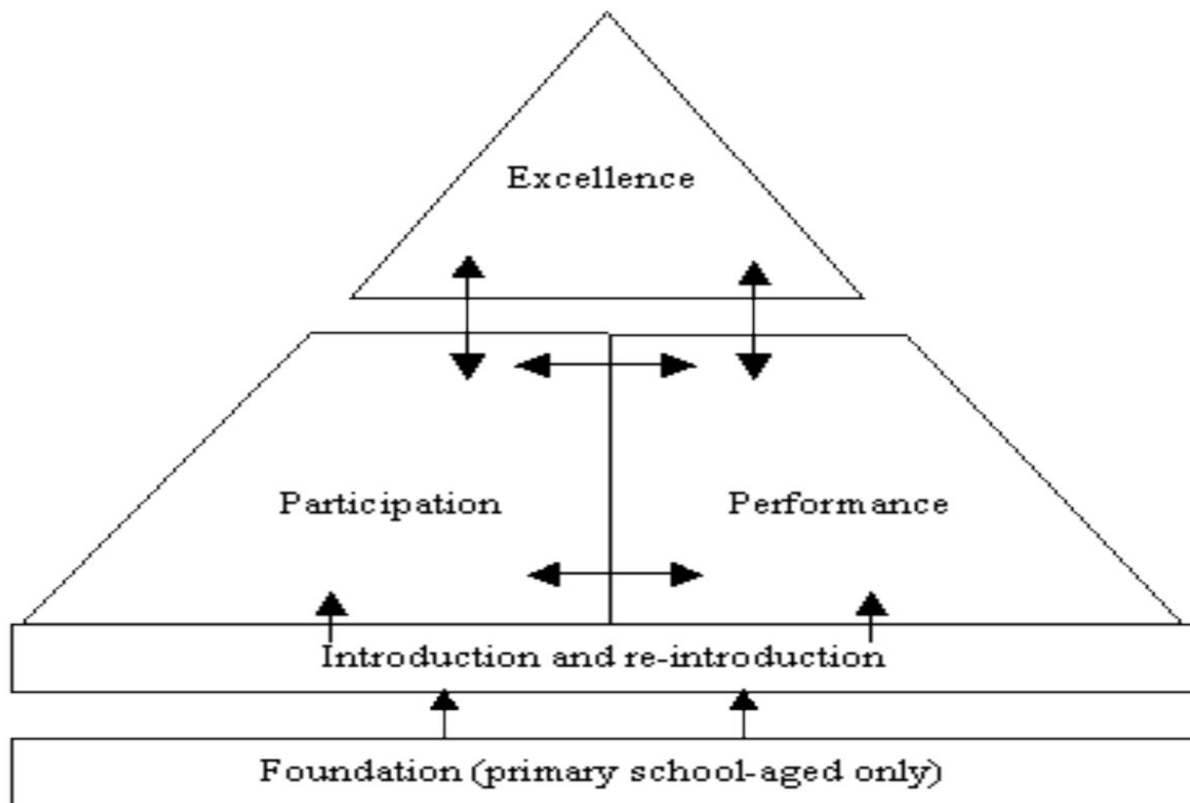


Chart 1: The sport development pyramid source (Adopted from Journal of Sport Management, 2008)

Positive Youth Development through Sport

The National Research Council and Institute of Medicine (NRCIM, 2002) has outlined four main areas of youth development. These are:-

- Physical,
- intellectual,
- psychological/emotional, and
- social

For each development area, several corresponding assets are suggested, that facilitate positive youth development. For example, good health habits and good health risk management skills are assets facilitating positive physical development. Knowledge of essential life skills, vocational

skills, decision-making skills, and critical reasoning skills contribute to positive intellectual development.

Numerous assets contribute to youths' psychological and emotional development including mental health, positive self-regard, coping skills, conflict resolution skills, mastery motivation, a sense of autonomy, moral character, and confidence. Finally, assets facilitating youths' social development include connectedness with parents, peers, and other adults, a sense of a social place, an ability to navigate in diverse contexts, and an attachment to pro-social or conventional institutions.

2.5 COACHING PHILOSOPHY

What is philosophy?

Philosophy is simply the way you see situations and experience in your life. It is the way you view people and develop relationship with them. Why a formal coaching philosophy statement is essential for all coaches. Assuming that you are a coach you presumably carry out your role based on your experience, knowledge, values, opinions and beliefs. This in itself is a philosophy and you likely do this unconsciously. The question is - do you actually know yourself well enough to understand what your core values and coaching methods are? A coaching philosophy that is well thought through clarifies many aspects of the coach's delivery and presents a consistent and positive message to the athletes being coached. One of the strongest benefits arising from a consistent and sincere approach to coaching is trust (Peter JL Thompson introduction to coaching 2007). A **strong bond between coach and athlete** leads to higher levels of commitment and athletic performance. With that in mind, it is the wise coach that takes the time to think through and formalize his or her personal coaching philosophy (Frank Reynolds).

Developing a Philosophy

Coaching may be the most special and important profession anyone can choose. This is not because sports are important, but, rather, because the young men and women who participate in sports are so valuable. Coaches have an opportunity to foster both their athletes' emotional and

physical development. The path to coaching success begins with defining a philosophy to guide your efforts.

Determining coaching objectives

The two most important considerations in developing a personal coaching philosophy are determining coaching objectives and coaching style. Coaching objectives could include improving the program's win/loss record, winning a league title, placing among the top five teams in the section or state championships, showing significant individual and team improvement, making the program fun for all the athletes, or teaching the athletes to compete well. Coaches often believe their first responsibility is to produce winning teams; however, winning should not be the single measure of success for the coach or the athletes. An overemphasis on winning can produce such negative responses in young athletes as anxiety, fear of failure, reduced self-esteem and a loss of motivation.

Coaching success should be measured in a variety of ways other than a state ranking, win/loss record, or a high place in the league meet. The number of athletes attracted to the program, the athletes' enthusiasm for track and field, the improvement the team shows through the course of the season and the amount of parental/community/ school interest and support generated for the program are equally important measures of success.

Winning the majority of the meets during the season does not necessarily make any coach a good leader or positive role model for young athletes. A coach's actions speak louder than words, especially during competition. Coaches must teach respect for the rules, the opponents and the judgment and integrity of officials by example through their behavior.

Developing an effective coaching style

Coaching style reflects how a person chooses to lead and interact with student athletes. It affects how a coach wants to motivate and discipline, and what role, if any, athletes are permitted to have in making decisions that affect them. Each person must choose the coaching style that best fits that person's personality, but every coaching style is a somewhat different combination of three approaches:

Authoritarian, cooperative and passive coaching styles

Everyone new to coaching should take some time to consider what coaching style works best for that person. Experienced coaches should also periodically re-examine their coaching styles to ensure they are still following the path onto which they originally embarked.

Here are some suggestions that can help determine a sound coaching philosophy:

- ✓ Remember the athletes should be the center of attention. Sports were not created to glorify coaches.
- ✓ The simple objective of coaching is to help athletes shorten the trial- and-error process of learning and ease the trial-and-terror experiences of competing.
- ✓ When coaching, focus on the skills needed, a method to teach and demonstrate them, and drills to practice and master them.
- ✓ Integrity, credibility and technical knowledge are the most important qualities of a good coach — in that order.
- ✓ Every athlete deserves to be addressed by first name and treated with dignity.
- ✓ A coaching style must not isolate a coach from the athletes. There must be a forum for open communication or the coach will never be in touch with the athletes. Coaches need to be willing to listen to all the athletes, hear criticism and respond by acting rather than reacting.
- ✓ Coaches cannot talk about winning without talking about losing. Is placing second or third, or not placing but recording a personal best, considered a failure? How do the athletes behave when they finish races they lose? How does the team behave after a tough loss? How are athletes expected to bounce back after performing poorly?
- ✓ Regardless of the style, coaches need to command their athletes' attention and respect. Coaches must continually and openly communicate, motivate, praise and discipline effectively.

TLC: TEACH•LEARN•COMPETE

Every decision a high school coach makes should be in the best interest of an athlete's physical, psychological and social development. The philosophy advocated by the LA84 Foundation is **TLC**: teaching, learning and competing.

Teaching represents what a coach provides student-athletes by way of instruction. The lessons a coach must teach include technical skills, positive attitudes about competition, the process of training and effective tactics and strategies. A coach must also teach athletes emotional self-discipline, responsibility, self-esteem and how to maintain poise by focusing on the things they can control. No less important are social values such as appropriate behavior, fair play, good sportsmanship and the importance of working together to accomplish team goals and objectives. Learning is the athletes' acceptance of what is taught. Learning is greatly influenced by the atmosphere a coach creates in helping athletes reach for their best.

Effective learning requires communication, motivation, feedback, cooperation and purposeful training. A positive approach to practice and training that emphasizes skill development, fitness, teamwork and fun will help to ensure athletes' learning experiences are positive. Competition is the essence of sport. Competitive skills are essential to prosper in a society where we compete for grades, spouses, jobs and promotions to achieve success, happiness and security. Track and field is a sporting arena in which athletes demonstrate both their physical and competitive skills. Coaches should portray the adventure of athletic competition as an opportunity for success rather than failure. Coaches must help athletes learn as much as possible from their competitive experiences, analyze what they do well and what they don't do well, and resume training with a new agenda and a renewed determination to improve. Coaches should emphasize that success in sports should be measured by each athlete's personal performance goals. Just because every track and field event has only one winner doesn't mean everyone else in that event is a loser. Competition should serve as a reference point for athletes to measure progress. Sometimes the pressures of competition can result in athletes setting goals that are unattainable. Goals that are too high guarantee failure even when the athlete performs well. Coaches should help athletes set realistic goals.

Motivating and communicating with young athletes

Sport psychologists have learned that two of the most important needs of young athletes are the need to have fun and the need to feel worthy. Certainly, it is easy to see when athletes have fun. They appear to be challenged, excited, stimulated and focused. They express feelings of enjoyment, satisfaction and enthusiasm.

Athletes also have a need to feel competent, worthy and positive about themselves. Sports can be threatening to young athletes when they equate achievement with self-worth as youngsters; we learn quickly that others judge our worth largely by our ability to achieve. To win is to be a success and to lose is to be a failure. This attitude causes tremendous anxiety in young athletes.

Social evaluation and expectations of others are also major causes of anxiety. Athletes become anxious when they are uncertain about whether or not they can meet the expectations of their coaches, parents, peers, or even themselves. The more uncertainty athletes have, and the more important they perceive the outcome to be, the greater their feelings of anxiety.

The very nature of sports involves an extensive evaluation of the skills of the participants. Any situation involving social evaluation of abilities that a youngster considers important can be threatening if he or she anticipates failing or receiving negative evaluations. Most youngsters place great value on athletic competence and are particularly sensitive to appraisal of their abilities by others. Mistakes and errors which are a natural part of the learning process can be misinterpreted as failure or incompetence. These competitive pressures can result in youngsters setting unrealistic standards of near-perfect execution, which virtually assures they will fail.

A coach must help athletes meet their need to have fun by structuring their sport experience so it challenges and excites without being threatening. Motivated athletes have a strong desire to master skills and demonstrate their competence. Similarly, a coach can help athletes meet their need to feel worthy by creating situations where everyone can experience some degree of success. The continual process of achieving incremental goals that are challenging, yet attainable, provides motivation. When athletes experience a taste of success, it reinforces their feelings of mastery, competence, pride and self-worth. This in turn stimulates their desire to pursue new levels of personal achievement.

Understanding motivation

True motivation must come from inside the individual to be effective and long term. Motivation cannot be given to someone; however, it can be nurtured and tapped. The word motivation is derived from the word motive, which is the desire to fulfill a need. The primary need we all have is the need to feel worthy. Our sense of self-worth is enhanced most by feelings of competence, accomplishment and acceptance. Simply put, we feel better about ourselves when we feel we are doing something well. We will work hard to improve in areas where we believe we have the potential for success. The more effort we put into the process of improving, the more our feelings of increased competence enhance our feeling of self-worth. Accomplishments and recognition along the way reinforce our worthiness. We also measure our self-worth by the acceptance we get from others, especially the sense of belonging to a group of peers.

The need to feel worthy is the single most powerful element of motivation. It should be easy to see why sports are a perfect vehicle for boosting an individual's sense of self-esteem. However, since only a few can be champions, there is a danger of athletes equating self-worth with the ability to win in competition. The message is, while the coach cannot make every athlete feel gifted, he or she can make all team members feel more competent.

What a coach can guarantee is that every athlete feels important and accepted. No athlete should have to earn a coach's acceptance. They should all be unconditionally accepted, and they should know it is OK to make a mistake. Once athletes of any ability level feel the security of having a coach's time, energy, interest, belief and trust, it is literally amazing the great things they will dare to do.

Helping athletes reach for their best

The ability to teach, communicate and motivate athletes is the art of coaching. Coaches should teach their athletes to focus on things they can control: their own performance and readiness to compete. When athletes worry about their opponents instead of focusing on things they can control, they limit their ability to compete well. Athletes who tend to worry about performance must be taught to focus on what they want to do (skill or strategy execution), instead of how they are going to perform against their opponent, the watch or the tape measure. Athletes should also recognize that winning is sometimes sabotaged by external factors beyond their control, such as

an oncoming cold, bad weather, or outright bad luck. Over time these things even out, and they will be the beneficiaries of such occurrences as often as they are the victims.

Athletes should know it is all right to make mistakes. Many young athletes fear making mistakes because they have been ridiculed or punished for making mistakes in the past. Coaches must create a supportive atmosphere in which athletes view making and correcting mistakes as a natural part of the learning process. Some athletes become so frustrated and angry at themselves when they make a mistake during competition that they lose their composure and perform far below their abilities.

Coaches should teach athletes that one of the things that separate champions from average athletes is the ability to let go of a mistake quickly and refocus on what needs to be done next. Communicating is the most important thing a coach does. This fact cannot be overstated. Effective communication involves the explicit expression of instructions, expectations, goals, ideas and feelings. Doing so enhances mutual understanding and is the first step in meeting the athlete's and coach's needs. Communication is a two-way street: both coach and athlete must listen and speak to make it work.

A coach must be credible in the eyes of the athletes in order to communicate with them. Credibility is the perception of the trustworthiness of what is said and done. To be credible in the eyes of an athlete, a coach must be knowledgeable about track and field, enthusiastic about coaching well, and consistent and positive.

A positive coaching attitude projects a desire to understand athletes, accept them for who they are, and treat them with respect and affection. It requires refined listening, clear speaking and the ability to give feedback and constructive criticism in a non-personal and instructive manner. A positive approach is characterized by the liberal use of praise, encouragement and positive reinforcement. Constant criticism, sarcasm, or yelling at athletes will increase their anxiety over making mistakes, decrease their sense of self-worth, and discourage them from continued participation.

Another important component of a positive approach is empathy. It is not the same as sympathy. Empathy is being aware of the feelings and emotions of the athletes. Coaches who are empathetic listen to their athletes and try to understand what is going on in their lives outside of

athletics. Praise must be sincere. When coaches are not sincere, they risk losing the respect of their athletes. It means little for athletes to hear “Good job” when in fact they know they have not done a good job. If the athletes or team have not performed well, the coach should be honest and acknowledge the fact they did not perform to their potential. However, athletes should also be complimented for things they have done well. Coaches should praise deserving efforts, not just final outcomes.

Attitude is the key to success. Athletes should know that champions expect to do well. Champions believe they will succeed and they recognize the important role that hard work and sacrifice plays in the quest for athletic excellence. Champions focus on goals and how to achieve them. They don’t surrender their goals easily. They identify their areas of weakness and work hard to eliminate them.

Athletes should be taught the most important kind of success resides in their personal improvement, giving their maximum effort, being willing to take risks, and striving to do their best. A coach needs to be there at all times to reassure athletes they are never losers when they give their best effort, an important lesson that will see them through many of life’s most difficult endeavors.

Athletes meet sports through the coach. It is the coach who frames the sport experience for the athlete. Studies indicate that the quality of coaching has the greatest influence on whether or not participation in high school sports becomes a positive experience for the young athlete. (IAAF track and field facilities manual 2008.) In developing a formal philosophy the coach can take **three key** components and to his or her best ability formulate a coaching philosophy document with the aim to be a better coach, to improve coach/athlete satisfaction and to achieve superior athletic results. These three components are:

1. Knowing yourself, your strengths, weakness and areas requiring improvement
2. Knowing what you are up against and the obstacles you may encounter
3. Understanding your athletes, their personalities, abilities, goals, and why they are in your sport.

Know Yourself

It takes honest assessment to admit to having weaknesses but we all have them. We just do not want them to interfere with good coaching judgment. By focusing on your strengths you will be able to identify consistent ways to coach that utilize those strengths. Are you a good teacher, or motivator, or academic, or communicator or a former athlete? Are you dynamic or easy going, or hardnosed or open and friendly? Use your strengths to your advantage. By taking time to make a serious assessment of your strengths and weaknesses and recognizing your morals, values and beliefs you are better able to adapt your own style to the athletes being coached. In addition, you will answer the important questions on why you are a coach, how you actually deliver as a coach and what objectives you are trying to accomplish. Self-knowledge leads to self confidences and you want to exude what you believe in. One other point to consider here is - how do others perceive you?

Know what you are up against - your coaching context

As important as it is to understand what makes you tick, it is equally important to understand the confines of your coaching context. By this, I mean: A good understanding of the age, gender and training level of the athletes you coach. How much time you and your athletes have available to train and compete? What is your development program based upon and how far can you take it by enhancing and incorporating other aspects such as sport psychology, nutrition education or sophisticated technique analysis? What funding, facilities, services and equipment are at your disposal? In addition, what are your short medium and long term goals for your athletes?

There could be other restrictions that will affect your coaching delivery. These include laws or policies on safe practices, club or school rules of behavior, competition with other sports, school pressures and outside activities, parental interference, or performance standards to qualify for teams and competitions. Knowing what you are up against enables you to tailor your annual training program to the specific needs of the athletes you have under your charge. By understanding the outside influences that will affect your program, you can incorporate those that are good practices. Such as policies on safety and behavior, adapt to others that restrict your ability to be the 'do it all coach' such as lack of funds, equipment or services, and minimize negative obstacles that will affect you personally or an athlete on your team or your team in

general. Dealing with parents can be a stressful situation and a clear philosophy on how you will deal with an irate parent will minimize or avoid the knee jerk reaction that often makes matters worse. By adapting your coaching philosophy to reflect the coaching situation you are dealing with you become more effective and productive and you minimize obstacles and other difficulties.

Understand your athletes, their personalities, abilities, goals and why they are in your sport. Communication is a vital aspect in coach/athlete relationships. It is very important to talk to your athletes individually to determine what their values and beliefs are, what their goals are and why they are participating. Without this knowledge, you might be delivering a coaching bag of apples to athletes wanting a bag of oranges. The program just will not work properly. As a coach, you are a powerful role model and can have a tremendous influence on your athletes if you and your athletes are on the same page. Take the time to get to know each of your athletes just as if you examined your own values, beliefs and habits. Once you know and understand each of your athletes, their strengths, weaknesses abilities and skills, then I suggest you develop an approach to coaching them. Will you focus on the stars? Will you treat everyone equal in terms of your attention and help? Perhaps the teamwork approach will work for you.

What is your attitude toward teamwork?

By developing a TEAM philosophy (Together Each Achieves More) as well as your personal coaching philosophy, you bring together ingredients for superior success. By knowing your athletes you know how each fits in with the TEAM philosophy. Some may have values or behaviors that undermine the team and you can work out solutions to change the athlete's behavior to fit for the good of the team. Knowing your athletes enables you to identify your leaders and role models that the rest of the team will respond positively. By getting athletes to buy into the 'TEAM' concept you will aid in streamlining a consistent approach to training and competition by each athlete. This makes coaching much easier and hopefully more rewarding.

Process versus Outcome

Every coaching philosophy should have a major statement on how the coach views the results of both training and competition. I cannot stress enough the importance of educating athletes that it is more important to focus on their process of development and how they performed in

competition rather than the results or outcomes that they achieved. In a race or game there can be only one winner. Does that mean everyone else is a loser? If you read the newspapers that is what you would think. Therefore, to build confidence and see measurable progress and to learn positively from mistakes made I urge all coaches to focus on the process and not the outcomes with their athletes. It is important for the athletes to do the same.

Winning vs. success

The opportunity for success is available to everyone if it is defined as performing to One's capability rather than focusing solely on the score of a given competition. This is especially true in the sport of track and field where individual improvement can be quantifiably measured by a watch or measuring tape. Even though a team may lose on the scoreboard, the shot putter who places fourth in his event but improves his lifetime best mark by a foot or the hurdler who does not place in the race but "three steps" all flights for the first time certainly has reason to feel successful.

Teaching athletes to focus on success and discussing with them what success really is, rather than allowing winning to be the only measure, nurtures the factors that ultimately lead to winning.

Success = Ability + Preparation + Effort + Will

- ✓ **Ability.** Everyone has ability, but it isn't distributed equally or predictably. This applies to coaches as well as athletes. Often ability is a gift of birth, but that doesn't guarantee success. The challenge isn't to have ability but to develop and use the ability that is given.
- ✓ **Preparation.** We gain greater use of our abilities by investing in preparation. Only through the persistent and consistent process of preparation can raw talent be transformed into greater capability. In track and field, this preparation is called training. Through proper training, athletes become faster, stronger, more skilled, knowledgeable, confident and mentally tough; however, although developing greater capability is important, it is still no guarantee of success.
- ✓ **Effort.** Developed ability realizes its value when expressed through the challenge of competition. That expression is accomplished when physical and mental effort summons

every ounce of one's capability. Still, athletes often find themselves nearing the finish of their race exhausted, having given all they think possible, but needing to find even more. In sport this is called...crunch time!

- ✓ **Will.** Crunch time is real, both in sport and life. It is that moment when a person thinks he or she has given all there is to give; only to find out even more is required. Many athletic contests are won or lost at this moment. Some athletes are able to draw on an inner strength to summon greater effort than they know themselves to have.

This is the use of one's will, the power to go back to one's personal reservoir again and again as needed.

When athletes and teams train hard to develop their ability, give their best effort in competition, and show the will to push themselves beyond self-imposed limits, they are successful. Too often, coaches and athletes miss experiencing the pride and satisfaction of success because they are too focused on winning. More often, coaches and athletes fail to win because they first fail to become successes.

Building success

Unlike winning, success can be experienced by every athlete every day. It doesn't, however, come easily or immediately. Success requires athletes be coached to develop some specific, personal attitudes. Robert Goodwin, track and field coach at St. Lawrence University, has identified six such attitudes.

1. The desire to strive for excellence.
2. The realization that nothing of value can be achieved without hard work and dedication.
3. The desire to display self-confidence.
4. The desire to show one's ability in competition.
5. The desire to cooperate as part of a team.
6. The desire to have fun.

2.6. COACHING

What is coaching?

The term coaching is often used to cover a wide range of activities, usually to help someone to prepare for something. Coaching in athletics has been described as the organized provision of assistance to an individual athlete or group of athletes in order to help them develop and improve. (Peter JL Thompson introduction to coaching 2007)

With a professional coach, is the practice of supporting an individual, referred to as a coach, through the process of achieving a specific personal or professional result? The term 'client' may be used in life-coaching but in commercial settings the term 'client' is used to describe the organization that 'pays' and not the person receiving coaching. Description of coaching process, the structure and methodologies of coaching are very numerous with one unifying feature, coaching approaches are predominantly facilitating in style, it is to say that the coach is mainly asking questions and challenging the coach. In sports, a coach or manager is an individual involved in the direction, instruction and training of the operations of a sports team or of individual sportspeople. This type of coach gets involved in all the aspects of the sport, including physical and mental player development. Sports coaches train, develop and mentor their athletes to become better at the physical components of the game. The coach is assumed to know more about the sport, and have more previous experience and knowledge. The coach's job is to transfer as much of this knowledge and experience to the players to develop the most skilled athletes. Combining these aspects of the sport, the coach is accountable for the overall performance and results of the team or player. (Marylebone Cricket Club coaching books)

2.7. COACHING ETHICS AND STANDARDS

One of the challenges in the field of coaching is upholding levels of professionalism, standards and ethics. To this end, many of the coaching bodies and organizations have codes of ethics and member standards and criteria according to which they hold their members accountable in order to protect coaching clients' interests.

2.8 COACHING STYLES

There are perhaps three coaching styles - autocratic (do as I say), democratic (involve the athletes in decision making) and laissez faire. The autocratic style could be broken into two types - telling and selling and the democratic style into sharing and allowing. There is little direction from a "Laissez fair" coaching style as this style allows the group to do what they want to. Coaches will use a variety of coaching styles depending on the coaching situation.

Autocratic Style - Telling

- * The coach decides on what is to be done
- * The athletes are not involved in the decision making
- * The coach defines what to do and how to do it

Autocratic Style - Selling

- ❖ The coach decides on what is to be done
- ❖ The coach explains what is required and the objectives
- ❖ The athletes are encouraged to ask questions to confirm understanding
- ❖ The coach defines what to do and how to do it

Democratic Style - Sharing

- ✓ The coach outlines the training requirements to the athletes
- ✓ The coach invites ideas/suggestions from the athletes
- ✓ The coach makes the decision based on the athletes' suggestions
- ✓ The coach defines what to do and how to do it

Democratic Style - Allowing

- ⊗ The coach outlines the training requirements to the athletes
- ⊗ The coach defines the training conditions

- ✪ The athletes brainstorm to explore possible solutions
- ✪ The athletes make the decision
- ✪ The athletes define what to do and how to do it

B. Woods Coaching Styles

- ✪ B. Woods (Applying psychology to Sport, Hodder & Stoughton, 1998) identified 4 styles of coaching:
 - Command style - direct instruction, coach dictates
 - Reciprocal style - athlete takes some responsibility for their own development - monitored by the coach
 - Problem solving style - athlete solves problems set by the coach
 - Guided discovery - athlete has freedom to explore various options

UKA Coaching Styles

UK athletics (UKA) identify the following coaching styles:

- * **Telling** - primarily the coach use instruction and explaining.
- * **Showing** - primarily the coach use demonstration.
- * **Involving** - primarily the coach allows self discovery and questioning to raise the athlete's awareness.

2.9. COACHING ROLES AND SKILLS

As the United Kingdom Coaching Strategy describes the role of the sports coach as: - one that "enables the athletes to achieve levels of performance to a degree that may not have been possible if left to his/her own endeavors". Dyson speaking to the 19th session of the International Olympic Academy, Greece 1979, widened the horizon when he said that "the wise coach develops not only the fullest physical potential in his charges, but also those capacities and habits of mind and body which will enrich and ennoble their later years".

COACHING ROLES

What exactly is the coach's role: recruiter, teacher, trainer, strategist, Personnel manager, administrator, promoter, communications expert, diplomat, Spokesperson, psychologist, impartial judge, disciplinarian, caring friend, counselor, parent substitute? To be a coach is to assume all of these diverse roles. For the coach, the greatest reward should not be the outcome of winning, but rather the process of training and competition that positively affects the personal development of young athletes. Great coaches use sport as a vehicle to enrich the lives and the futures of their athletes. (IAAF track and field facilities manual 2008) The role of the sports coach is to create the right conditions for learning to happen and to find ways of motivating the athletes. Most athletes are highly motivated and therefore the task is to maintain that motivation and to generate excitement and enthusiasm. The role of the coach could be quite daunting since the above implies what could be construed as quite awesome responsibility, especially for the part-time non-professional. The roles that you will find you undertake as a coach will be many and varied and you will find at some stage in your coaching career that you will be, but not limited to:

- * **Advisor** - Advising athletes on the training to be conducted and suitable kit and equipment.
- * **Assessor** - Assessing athletes performance in training and in competition
- * **Counselor** - Resolving emotional problems on the basis that sharing anxieties can be both relieving and reassuring.
- * **Demonstrator** - Demonstrate to the athletes the skill you require them to perform.
- * **Friend** - Over the years of working with an athlete a personal relationship is built up where as well as providing coaching advice you also become someone, a friend, who they can discuss their problems or share their success with. It is important to keep personal information confidential because if you do not then all respect the athlete had for you as a friend and coach will be lost.
- * **Facilitator** - Identify suitable competitions for them to compete in to help them achieve their overall objectives for the year.

- * **Fact finder** - Gathering data of national and international results and to keep abreast of current training techniques.
- * **Fountain of knowledge** - This may be part of the advisor role in that you will often be asked questions on any sporting event, events that were on the television, diet, sports injuries and topics unrelated to their sport.
- * **Instructor** - Instructing athletes in the skills of their sport.
- * **Mentor** - When athletes attend training sessions you are responsible, to their parents and family, for ensuring that they are safe and secure. You have to monitor their health and safety whilst training and support them should they have any problems or sustain any injuries.
- * **Motivator** - Maintain the motivation of all the athletes the whole year round.
- * **Organizer and planner** - Preparation of training plans for each athlete and organize attendance at meetings and coaching clinics.
- * **Role Model** - A person who serves as a model in a particular behavioral or social role for another person to emulate. The way you conduct yourself whilst in the presence of your athletes provides an example of how they should behave - what sort of example should we be providing to someone else's children? Perhaps one of the most important roles of a coach.
- * **Supporter** - Competition can be a very nerve racking experience for some athletes and often they like you to be around to help support them through the pressures. Role of a 'Friend' and perhaps 'Counsel or' come in here to.

COACH/ATHLETE TRAINING ROLES

The roles of the coach and athlete in determining training requirements will change over the time an athlete is with a coach.

- ⊕ When an athlete first starts in a sport/event (cognitive stage) the coach's role is to direct the athlete in all aspects of training (telling or showing coaching style).

- ❖ As the athlete develops and demonstrates a sound technical understanding (associative stage) of the sport/event then gradually the coach's role changes to one where the coach and athlete discuss and agree appropriate training requirements (involving coaching style).
- ❖ As the athlete matures and demonstrates a sound understanding of training principals (autonomous stage) then the athlete will determine the training requirements. The coach's role becomes one of a mentor providing advice and support as and when required.

As a coach one initially need to develop the skills of: organizing, safety, building rapport, providing instruction and explanation, demonstrating, observing, analyzing, questioning and providing feedback. The skills are discussed below.

Organizing

In organizing the training session you need to plan in advance how you will manage the athletes, equipment and area - group athletes accordingly to numbers, ability and the activity – continually check the plan is safe for the session

Safety

In providing a safe environment for the athletes you must assess the risk of: the area, equipment and athletes - continue to assess risk throughout the session - keep athletes on the set task and follow correct practice and progression.

Building Rapport

In building rapport with the athletes learn and use their names, smile and make eye contact, coach the athlete rather than the sport, show interest in and respect for the athletes.

Instruction and explanation

In providing Instruction and Explanation you should think about and plan what you are going to say, gain the athlete's attention, keep it simple and to the point and check they understand by asking open questions.

Demonstration

In providing demonstration make sure you are in a position where the athletes can clearly see you, focus on only 1 or 2 key points, repeat the demonstration 2 or 3 times (side, back and front view), ask if they have any questions and check they understand by asking open questions. There are times when it might be more appropriate to use someone else to provide the demonstration.

Observation and Analysis

In observing and analyzing break the action down into phases, focus on one phase at a time, observe the action several times from various angles, compare the action with your technical model and if appropriate determine what corrective action is required. Remember your ears can also be used to observe - e.g. listen to the rhythm of the feet of the hurdler.

Feedback

In providing feedback encourage the athlete to self analyze by asking appropriate open questions, provide specific and simple advice, limit the advice to 1 or 2 points, check they understand what they will do next and make the whole process a positive experience for the athlete.

Developing a safe environment

As IAAF level II coaching manual describes: As a coach you must be aware that each athletics event and training or competition situation contains an element of danger. It is important that you should have a good understanding of these inherent safety risks and wherever possible to remove or reduce these risks. Obviously, certain events place athletes at greater risk than others. Coaches have a duty to develop a safe environment for each athlete and to prevent injuries. But injuries and illness are an almost inevitable consequence of training and competition at some time, no matter how safe the environment and the coach must be able to manage them promptly and correctly.

2.10 COMMUNICATION SKILLS

A great coach must be a great communicator

Without question, the key to being a successful coach is the ability to communicate effectively. Communication is a two-way process between the sender and receiver. It takes on many forms, some overt and others subtle. Coaches communicate with their athletes by what they say, how

they say it, what they write, what they do and how they behave. To communicate effectively, coaches must also receive communication from their athletes. In a word, coaches must listen.

Guidelines to improve communication skills

- Understand the primary burden of responsibility for any communication belongs to the sender, not the receiver. If it is important enough for a coach to say or write something to an athlete, it is important enough to be repeated; reinforced and reviewed to be sure the message is understood. Communication must be an ongoing process, especially with high school athletes.
- Coaches must communicate with those under them with the same degree of respect as with those above them. Some coaches are unaware they may be communicating with younger athletes or athletes they perceive to be of lesser quality in a condescending or demeaning fashion. A coach should always ask himself or herself if the choice of words, tone and style of delivery reflects the attitude and respect that coach would like to receive in communication from an athletic director or principal.
- Communicate with athletes regularly, consistently and thoroughly.

Make communication easier by having at least one team meeting a week so athletes come to anticipate and expect certain messages. Avoid just talking at the athletes. Ask for their questions and input.

- Instruct Constructively.

Too often, athletes are only told what they are doing wrong. It is more important and far more effective, to tell them how to do things well by use of the following:

- Reinforce the positive.
- Praise what athletes are doing well – this prepares them to be receptive to the next instruction.
- Explain the cause of the mistake and how to correct it. Be specific and keep it short. Athletes can only process a limited amount of information at one time. Be patient and careful not to show any frustration.

☛ Use the "Sandwich" approach. "Sandwich" corrective instruction between two positive comments to take the sting out of continued corrections. Communication is the art of successfully sharing meaningful information with people by means of an interchange of experience. Coaches wish to motivate the athletes they work with and to provide them with information that will allow them to train effectively and improve performance. Communication from the coach to athlete will initiate appropriate actions. This however, requires the athlete to receive the information from the coach but also to understand and accept it. Interpersonal skills refer to mental and communicative algorithms applied during social communications and interaction to reach certain effects or results. The term "interpersonal skills" is used often in business contexts to refer to the measure of a person's ability to operate within business organizations through social communication and interactions. Interpersonal skills are how people relate to one another. Having positive interpersonal skills increases the productivity in the organization since the number of conflicts is reduced. In informal situations, it allows communication to be easy and comfortable. People with good interpersonal skills can generally control the feelings that emerge in difficult situations and respond appropriately, instead of being over whelmed by emotion. Coaches need to ask themselves:

- ❖ Do I have the athlete's attention?
- ❖ Am I explaining myself in an easily understood manner?
- ❖ Has the athlete understood?
- ❖ Does the athlete believe what I am telling him/her?
- ❖ Does the athlete accept what I am saying?

Non-verbal messages

At first, it may appear that face-to-face communication consists of taking it in turns to speak. While the coach is speaking, the athlete is expected to listen and wait patiently until the coach finishes. On closer examination, it can be seen that people resort to a variety of verbal and non-verbal behavior in order to maintain a smooth flow of communication. Such behavior includes head-nods, smiles, frowns, bodily contact, eye movements, laughter, body posture, language and many other actions. The facial expressions of athletes provide feedback to the coach. Glazed or down turned eyes indicate boredom or disinterest, as does fidgeting. Fully raised eyebrows signal disbelief and half raised indicate puzzlement. Posture of the group provides a means by which their attitude to the coach may be judged and act as pointer to their mood. Control of a group demands that a coach should be sensitive to the signals being transmitted by the athletes. Their faces usually give a good indication of how they feel, and a good working knowledge of the meaning of non-verbal signals will prove invaluable to the coach.

Communication blocks

Difficulties in communicating with an athlete may be due a number of issues including the following:

The athlete's perception of something is different to yours

- The athlete may jump to a conclusion instead of working through the process of hearing, understanding and accepting
- The athlete may lack the knowledge needed to understand what you are trying to communicate
- The athlete may lack the motivation to listen to you or to convert the information given into action
- The coach may have difficulty in expressing what she/he wishes to say to the athlete
- Emotions may interfere in the communication process
- There may be a clash of personality between you and the athlete

These blocks to communication work both ways and coaches need to consider the process of communication carefully.

Effective Communication

Before communicating with an athlete, coaches should consider:

- * WHY they want to communicate
- * WHO they wish to communicate with
- * WHERE and WHEN the message could best be delivered
- * WHAT is it that they want to communicate
- * HOW they are going to communicate the information

Effective communication contains six éléments:

Clear	Ensure that the information is presented clearly
Concise	Be concise, do not lose the message by being long winded
Correct	Be accurate, avoid giving misleading information
Complete	Give all the information and not just part of it
Courteous	Be polite and non-threatening, avoid conflict
Constructive	Be positive, avoid being critical and negative

Table 1: Elements of effective communication (adopted from UKA athlete development)

Be Positive

When coaches provide information to the athlete that will allow them to take actions to effect change, it is important that they provide the information in a positive manner. Look for something positive to say first and then provide the information that will allow the athlete to effect a change of behavior or action. Coaches should:

- Develop their verbal and non-verbal communication skills
- Ensure that they provide positive feedback during coaching sessions
- Give all athletes in their training groups equal attention
- Communicate as appropriate to your athlete's thinking and learning styles
- Ensure that they not only talk to their athletes but they also listen to them as well

Improved communication skills will enable both the athlete and coach to gain much more from their coaching relationship.

2.11 DEVELOPING AND MAINTAINING CREDIBILITY

Athletes accept, respect and more likely to communicate with a coach who has credibility. This credibility is developed in a number of ways:

✓ Knowledge of athletics

You should have confidence in what you know about athletics and also the confidence to let athletes know what you don't know. It is better to say "I don't know the answer to that, but I'll find out", than to guess an answer and be incorrect.

✓ Talk only when necessary

If you talk too much athletes will not know what is important and what is not. Make sure that what you have to say is important and expressed in simple, clear language.

✓ Clothes and appearance

How you look will affect people's opinion of you, especially in the early stage of relationships. Athletes like to feel pride in their coach and this is developed if the coach appears professional in dress, manner and preparation.

✓ Behavior

Effective communication is the basis of good coaching. Without this communication it is difficult for the coach to pass information to the athlete. Both mental skills learning and physical

skills learning are based on instruction and explanation, demonstration, practice and feedback. Developing effective communication skills will not only aid the process of teaching mental and physical skills, but help the coach in all their various roles

Developing a safe environment

As IAAF level II coaching manual describes: As a coach you must be aware that each athletics event and training or competition situation contains an element of danger. It is important that you should have a good understanding of these inherent safety risks and wherever possible to remove or reduce these risks. Obviously, certain events place athletes at greater risk than others. Coaches have a duty to develop a safe environment for each athlete and to prevent injuries. But injuries and illness are an almost inevitable consequence of training and competition at some time, no matter how safe the environment and the coach must be able to manage them promptly and correctly.

2.12 THE COACH-ATHLETE RELATIONSHIP

Probably the first thing that decides whether an individual athlete ‘needs’ a coach is their age, their stage of development in athletics, what they want to achieve and their personality. It may also depend on the area of athletics they are most interested in.

There are probably more self-coached athletes in the endurance events than there are in the ‘power’ events of the throws, jumps, sprints, hurdles and combined events. And, within the endurance events, there are probably more self-coached athletes in road and cross country running than there are in middle and long distance track or race walking events.

When the coach and athlete in athletics have come together it has usually been through a chance meeting, frequently in a club environment. Together, the coach and athlete have built and developed a working relationship. This relationship has reflected that coaching is a complex social encounter with many roles and responsibilities for the coach. We have also seen that much of a coach’s development is not on a course where knowledge and learning are delivered and assessed formally but through the actual practice and experience of coaching, over time.(Peter JL Thompson introduction to coaching 2007).

Interactional approach

According to Handbook of Sports Medicine and Science, one of the key tenets to understanding people in general and motivation in particular is that both individuals and situations must be understood to provide for optimal motivation. More specifically, both individual factors such as personality, needs, goals, and interests and situational factors such as coaching/teaching style, win-loss record, support of the community, and tradition as well as how individual and situational factors interact need to be considered when trying to determine the most effective way to motivate. Although one might have a general principle that says positive reinforcement is the best way to motivate athletes, punishment might indeed be more effective for a specific athlete (e.g., one who is very competitive) in a specific situation (e.g., when at the end of close, important games). In essence, there is a science and an art of coaching and teaching. Good coaches and teachers know when to apply these principles and to whom, which is the art of coaching and teaching.

Confidence in coaches

The study of self-confidence in sport has progressed to focus on confidence in coaches as well as athletes. The importance of self-confidence for coaches is apparent in the following quotes from inexperienced coaches: “I wasn’t as confident as I wished I had been from the start ... and I think that weakened the power of my coaching.” “I should have started out just being more confident in myself. If I had been a little stronger, I would have been more effective throughout the season” (Weiss et al., 1991). Coaches’ confidence has been predicted by prior success, coaching experience, perceived athlete talent, and social support. Similar to findings with athletes, social support is a stronger source of confidence for female coaches than for male coaches. In structured interviews, coaches have identified the development of their athletes, their own coaching education and development, knowledge and preparation, leadership skills, athlete support, and experience as sources for their coaching confidence. Coaches who are highly confident that their teams will perform well have tended to attribute that confidence to good competitive and practice performance, preparation, favorable social comparison with the opponent, and a belief in their team’s resilience. In contrast, coaches who are less confident that their teams will perform well have tended to attribute that confidence to unfavorable social comparison with the opponent, bad competitive and practice performance, inconsistency in the

team's performance, physical problems, and low athlete self-confidence. Coaches identify performance success, preparation, and social support as important sources of confidence

Coaches provide more praise and encouragement to athletes than low-confident coaches, whereas low-confident coaches perform more instructional and organizational behaviors than high-confident coaches. With regard to performance, high-confident coaches have higher winning percentages than low-confident coaches, and coaching confidence is predictive of team performance. Coaching confidence has also been positively associated with team confidence, but not individual athlete self-confidence. With regard to gender differences.

Injury and its prevention

Injury

There are two ways in which injuries can occur. An injury may be caused by a particular traumatic incident, for example fractured collar bone from falling in a race. On the other hand the injury may be caused by over-use, for example, Achilles tendon injuries in runners. Either may be caused by intrinsic factors, when outside agents are involved. In sport requiring long periods of training the problem of over-use injuries may well be of equal, and often more, importance to prevent.

Prevention of injury

According to IAAF II coaching manual description: The saying 'prevention is better than cure' is especially relevant to the athletes. Many preventive measures are very much common sense but specific precautions are still important.

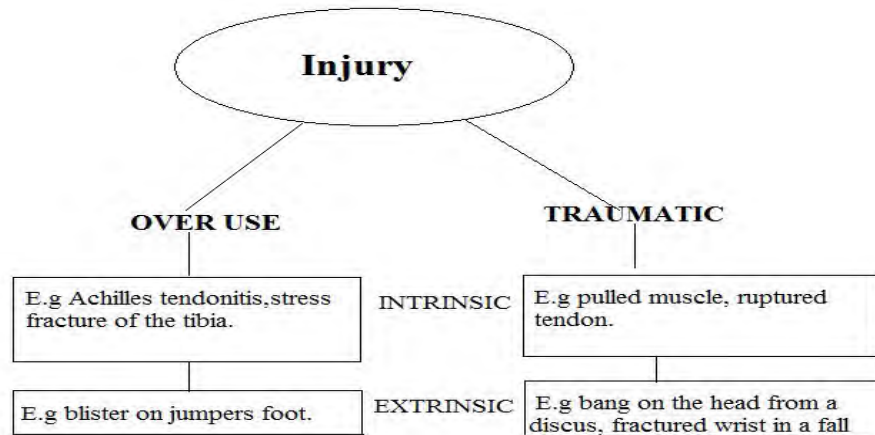


Chart 2: Types of injury (Adopted from coaching manual of middle and long distance race IAAF, 2007)

Remember that athletes are also at risk from non-sport activities. They can fall down a step or trip up as easily as non-athletes. No matter how safety conscious you are accidents will happen. If you are constantly aware of possible dangers you should be able to minimize the risks. This chapter is intended to help you realize what practical preventive measures you can apply in your coaching and what actions to take if injury does occur.

According to IAAF level II coaching manual description injury can be prevented through:

Prevention through Skill

Skill is of great importance in safety. You must see skills training as not simply a means of improving Performance, but also as a means of preventing injury. Skill involves not only the athlete's physical control to make the body do what the mind instructs, but also the mental ability to 'read' a situation, to know the risks involved, and so reduce them.

It is important for the athlete to develop the ability to relax in competition and training so that the body can be allowed to carry out the required activity at an automatic level. Tension and anxiety can break down the reflex nature of skilled performance and increase the risk of injury, such as when a sprinter tries too hard to maintain speed and 'pulls' muscle. Fatigue also causes a breakdown of skill. This fatigue may occur in a single training session or result from training

loads being too high or too close together. Whether overtraining is short term or long term a coach must be able to recognize the signs and symptoms of fatigue and reduce training levels before injury or illness occurs.

General symptoms of fatigue and stress:

- ✓ Listlessness. Lack of responsiveness and enthusiasm.
- ✓ Loss of appetite
- ✓ Disturbance of sleep and waking up tired
- ✓ Raising of resting heart rate
- ✓ Possible loss of weight
- ✓ Incomplete recovery between sessions
- ✓ The skin and muscles may appear and feel 'puffy'
- ✓ They express relief when a chance to 'escape' from training or competition presents itself.

Prevention through Fitness

Skill alone will not totally protect an athlete because he is at risk if he undertakes activity beyond the limit imposed by his general fitness. Increased fitness reduces the risk of injury in two ways. Firstly, by its effect on the muscles, tendons and joints and, secondly, by increasing general endurance so that the participant can compete for the whole duration of training and competition without fatigue.

We have already discussed the five main components of physical fitness, Strength, Speed, Endurance, coordination and Flexibility and each of these must be developed to a sufficient level to do the required activity.

If we look at strength, as an example, we know that muscles become stronger if they are made to work. The work load that you choose must be appropriate to the athlete's requirement for his

If we look at strength, as an example, we know that muscles become stronger if they are made to work. The work load that you choose must be appropriate to the athlete's requirement for his particular event. For example, it is obviously unnecessary to strengthen the shoulder girdle

muscles of a marathon runner in the same way you would strengthen those of a discus thrower. Strength training must meet individual needs and the most appropriate training for muscles is frequent repetition of the type of work required for individual skills. Correctly strengthened muscle is more resistant to injury.

Coordination means that the muscles are receiving the message to pull at the correct times and in the correct sequence. An athlete who has well developed coordination is at less risk of injury because their muscles are acting at the correct times at the correct force and are not working against each other.

2.13 PRINCIPLES OF TRAINING

Why do people get involved in physical activity?

People get involved in exercise for a number of reasons: to improve their health and physical condition, to achieve a sporting ambition, to relieve the tension and stress of daily life, to lose weight, it makes them feel good. Participating in sport encourages co-operation in team sports, develops the element of competitiveness, provides a physical challenge and the opportunity to meet new people and make new friends.

The effect of training for best performance

The effect of physical training to enhance the performance of high jumpers is determined by certain factors:

- The intensity of the training season
- The frequency per week of the training season and the duration of the training program
- The type of training program
- The genetic limitation
- The mode of exercise used during the training
- The maintenance of training effects

(Edward L. Fox and Donald K. Mathews 1981:80)

Training must be continuous from year to year for high performance. But is not to say that sport activity is only to high performance, it is for many other benefits too. For high performance in any sport exercises and specific training for the event are very important.

. . . The athlete must progressively extend the duration of effort in the overall training program over the first two weeks, months and perhaps even years of preparation for a sport activity. One should not forget that the effect of training could be lost after several weeks of break that is what is known as "detraining" (Dr. Bezebih Wolde 1997:49)

Daniels stated that (1998:49) make up the final quality phase of the intense distance program and should be set up to take advantage of strength and previous training and racing experience. The key component of in-season should be adequate rest and recovery from work outs: quality training, but of a limited volume. The toughest physical work is behind the athlete and improve will come as a result of what has already then in the off-season and preparatory season. Don't increase training stress during competition phase. Just do quality works with minimal efforts and put the energy in to high quality races. (Jack Daniel, 1998:243)

The above statements indicate that, training must be specific to seasons and the amount of training program should be based on the ability of the athlete he/she can resist. If not so, it can cause damage on the individual's performance, health condition and outcome became non progressive.

For any training program to be effective the coach or the athlete must follow a specificity principle. Training to improve an athlete's performance obeys the principles of training: specificity, over load, recovery, adaptation, and, reversibility.

Specificity

To improve the range of movement for a particular joint action, you have to perform exercises that involve that joint action. It is quite possible for an athlete to have good mobility in the shoulder joint but to have poor hip mobility. Conducting shoulder mobility exercises may further improve the shoulder mobility but it will not affect hip mobility. In addition to developing general levels of all round mobility in an athlete, coaches need to consider the specific mobility requirements of a given event. The coach can analyze the technique of his/her event, identify

which joint actions are involved and determine which need to be improved in terms of the range of movement. A thrower, for example, might require improvements in his/her shoulder and spine mobility. A hurdler might need to develop his/her hip mobility. The amount and nature of the mobility training required by each athlete will vary according to the individual athlete's event requirements and his/her individual range of movement for each joint action. It may be necessary to measure the range of movement for particular joint actions to determine the present range and future improvement. Specificity is an important principle in strength training, where the exercise must be specific to the type of strength required, and is therefore related to the particular demands of the event. The coach should have knowledge of the predominant types of muscular activity associated with his/her particular event, the movement pattern involved and the type of strength required. Although specificity is important, it is necessary in every schedule to include exercises of a general nature (e.g. power clean, squat). These exercises may not relate too closely to the movement of any athletic event but they do give a balanced development and provide a strong base upon which highly specific exercise can be built.

To use heavy throwing implements or weighted belts may seem the obvious solution to the specificity problem, but it is probable that by doing so the athlete will unconsciously develop compensatory movements in his/her technique in adjusting to the new weight. Most authorities consider that in the throwing events the training implement should be kept within 15% of the competition weight.

Can we be specific in the speed of movement? Training at low velocity increases low velocity strength substantially but has little effect on high velocity strength (Coyle and Fleming, 1980).

Is there then any justification for slow velocity strength training for athletes who have to perform movements at great speed? Yes. Slow velocity training may be of value in stimulating maximum adaptation within the muscle. Muscle growth (and increase in contractile strength) is related to the amount of tension developed within the muscle (Goldberg, 1975). When an athlete performs high velocity strength work, the force he/she generates is relatively low and therefore fails to stimulate substantial muscular growth. If performed extensively the athlete may not be inducing maximum adaptation with the muscles. It is important therefore for the athlete to use fast and slow movements to train the muscles.

Overload

When an athlete performs a mobility exercise, he/she should stretch to the end of his/her range of movement. In active mobility, the end of the range of movement is known as the active end position. Improvements in mobility can only be achieved by working at or beyond the active end position.

- Passive exercises involve passing the active end position, as the external force is able to move the limbs further than the active contracting of the protagonist muscles
- Kinetic mobility (dynamic) exercises use the momentum of the movement to bounce past the active end position

A muscle will only strengthen when forced to operate beyond its customary intensity. The load must be progressively increased in order to further adaptive responses as training develops, and the training stimulus is gradually raised. Overload can be progressed by:

- increasing the resistance e.g. adding 5kg to the barbell
- increasing the number of repetitions with a particular weight
- increasing the number of sets of the exercise (work)
- increasing the intensity- more work in the same time, i.e. reducing the recovery periods

Recovery

Rest is required in order for the body to recover from the training and to allow adaptation to take place.

Adaptation

The body will react to the training loads imposed by increasing its ability to cope with those loads. Adaptation occurs during the recovery period after the training session is completed. If exercises lasting less than 10 seconds (ATP-CP energy system) are repeated with a full recovery (approximately 3 to 5 minutes) then an adaptation in which stores of ATP and CP in the muscles are increased. This means more energy is available more rapidly and increases the maximum

peak power output. If overloads are experienced for periods of up to 60 seconds, with a full recovery, it is found that glycogen stores are enhanced. The most noticeable effect of weight training with heavy loads on fast twitch muscle fibers is larger and stronger muscles (hypertrophy).

Reversibility or Detraining

Improved ranges of movement can be achieved and maintained by regular use of mobility exercises. If an athlete ceases mobility training, his/her ranges of movement will decline over time to those maintained by his/her other physical activities. When training ceases the training effect will also stop. It gradually reduces at approximately one third of the rate of acquisition. Athletes must ensure that they continue strength training throughout the competitive period, although at a much reduced volume, or newly acquired strength will be lost (Jenson and Fisher, 1972).

Detraining risk for athletes

The effects of a long period of inactivity on physical fitness come from a UK case study of an Olympic rower, who took more than 20 weeks to fully recover his fitness after an eight-week lay-off. Although the athlete in question took the time off in response to the need for a physical and mental break rather than because of illness and injury, this case study has clear implications for injured athletes. The athlete, an elite heavyweight male rower and current Olympic champion, allowed himself the luxury of eight weeks of inactivity after competing in the Sydney Olympic Games in September 2000. His fitness was assessed by means of a lab-based incremental rowing test on four separate occasions: eight weeks before the Olympics; after eight weeks of inactivity; after eight weeks of retraining; and after a further 12 weeks of training.

The key findings were as follows: After eight weeks' detraining

- $\dot{V}O_2$ peak had decreased by 8%. After eight weeks of retraining it had increased by only 4%, returning to just below pre-Olympic values after a further 12 weeks;
- Power at peak oxygen consumption fell from a pre-Olympic value of 546W to 435W - a reduction of 20%. After eight weeks' retraining it had increased by 15%, resuming pre-Olympic values after a further 12 weeks;

- Power at reference blood lactate concentrations declined by 27%, but returned to just below or just above pre-Olympic levels after 20 weeks' retraining. The researchers recommend that training programs should limit periods of complete inactivity to no more than two to three weeks. Prolonged periods of inactivity should be avoided and the training program should incorporate some form of "maintenance" training where a prolonged break is desired.

2.14 PERIODIZATION

The integration of these four components of planned performance training with the fundamental principles of training results in the periodization of the training process. Periodization is the key to planned performance. It is the division of training into distinct units that emphasize different methods and types of training. The aim of periodization is to maximize the physical progress of the athletes and prepare them for a concentrated period of peak competitive activity. Good periodization of training results in good performances on the track or in the field. Devising a functioning plan that varies the mode, volume and intensity of work in accordance with the time available for training and competition enables positive progress to be the rule rather than the exception.

While the concept of periodization may seem complex, it can be explained by a simple metaphor; periodization is the recipe of training. This recipe controls the amount of overload, its progression and variation, the specific ingredients involved, individual tastes or differences, and the rest or settling required to produce the well cooked athlete rather than one who is under-prepared, overcooked or too often burned.

The training time must be divided into seasons. These seasons are off-season training, pre-season training and in-season training.

Planning and Scripting Training Sessions

Each daily training session should meet the needs of your athletes while making the best use of your practice time and coaching staff. If you have an experienced coaching staff, each coach should be responsible for planning and scripting each day's training for his or her respective event area. Head coaches should give inexperienced coaches a script for each day's training and have them administer the workout. Communication and cooperation among coaches is essential, especially when athletes are working with more than one coach to train for multiple events.

Each athlete on the team should be designated as a specialist in one event area this is probably going to be the event in which the athlete will compete during the championship part of the season. The coach responsible for that event area should then become the athlete's "primary coach"—the coach responsible for coordinating that athlete's entire training program for the season.

The athlete should begin each training day by checking in with the "primary coach" to find out what that day's training will be. The primary coach should have already discussed with the other coaches on the staff when and to what extent his or her athletes will work that day with those other coaches in their event areas.

At the end of the training day, the athlete should once again check in with his or her "primary coach." In fact, there may be some days where the athlete will spend the entire training day with another event area coach; however, the primary coach will always know exactly what type of practice and what type of workload the athletes completed, so the next day and following week's training can be appropriately planned.

A hard day of training should be followed by an easier day so the athlete can recover before beginning another quality training session. Multi-event athletes who go from one coach to another without a coordinated training plan are extremely vulnerable to injury and burnout. The head coach may have to be an arbitrator for the training schedule of a star athlete who competes in several event areas. Placing athletes in the right events is oftentimes the difference between winning or losing a close dual meet. Lineups should be planned, distributed to the coaching staff and posted for the athletes as far in advance of the meet as possible...one week at a minimum. Once a meet lineup is set, only the head coach should ever make a change. An assistant should

never remove or add an athlete from an event without discussing it with the head coach first. This is not a matter of maintaining a protocol or a "pecking order", it is a matter of making practical decisions that can affect a team.

For example, if an assistant coach adds an athlete to an event, it may be the fourth event of the meet for the athlete and he or she may no longer compete in any other events. The head coach may have been saving that athlete as a back up to run a leg in a relay for another athlete who was nursing an injury. Conversely, if two or even three assistant coaches pull athletes out of events, then all of the sudden a meet that was not suppose to be close, becomes so.

Preparing for the Seasons

At the end of each track season, it is important that coaches assess the condition of their facilities and equipment and inventory their implements and team uniforms for the following year. Requests for facility improvements, repairs, and new equipment usually must be submitted to a school or district prior to the end of the previous school year. However, if no requests were made at the end of the previous year, those requests should be made as soon as possible in the current school year.

Funding sources become available at odd times during the year, and principals have some leeway in determining how that money will be spent. If a coach has a request sitting on the desk of the principal when new money becomes available, there is a chance the proposal will be funded. If any coach is waiting for the principal to come ask if there is anything the team needs, that coach may be waiting for a long time.

The following pages list items that should be assessed and inventoried at the end of the previous track and field season. Copies of these assessments should be given to both the site principal and athletic director. It is imperative that coaches provide administrators with written documentation as to what is unsafe or inadequate!

Off-season training

Training during this period should be devoted to remaining reasonably active without necessarily staying involved in the chosen sport. Athletes should monitor their percentage of body fat and

activity levels so that they begin preseason training at or close to their competition weight training and skill development programs to remedy and any diagnosed weaknesses.

Per-season training

It usually last for between 6 weeks and 3 months. It involves progressive development of the energy of the energy system that are important in the sports and practice of the basic skills.

In-season training

The emphasis during the competitive season should be on skill and strategy with maintenance of preseason fitness. The coach should be aware of the need to supplement skill sessions with more intensive weigh, sprint or endurance training where it seems necessarily.

It may be better to aim for peak performance during the middle of the season (not at the start) so that the performer can maintain his/her peak in to the finals. Devis etal (1986:162)

Training Programs

A training program has to be developed to meet the individual needs of the athlete and take into consideration many factors: gender, age, strengths, weaknesses, objectives, training facilities etc. As all athletes have different needs a single program suitable for all athletes is not possible.



Chart 3: Training path way

2.15 NUTRITION

Nutrition (also called **nourishment** or **aliment**) is the provision, to cells and organisms, of the materials necessary (in the form of food) to support life. Many common health problems can be prevented or alleviated with a healthy diet.

The diet of an organism is what it eats, which is largely determined by the perceived palatability of foods. Dietitians are health professionals who specialize in human nutrition, meal planning, economics, and preparation. They are trained to provide safe, evidence-based dietary advice and management to individuals (in health and disease), as well as to institutions. Clinical nutritionists are health professionals who focus more specifically on the role of nutrition in chronic disease, including possible prevention or remediation by addressing nutritional deficiencies before resorting to drugs. While government regulation of the use of this professional title is less universal than for "dietician", the field is supported by many high-level academic programs, up to and including the Doctoral level, and has its own voluntary certification board, professional associations, and peer-reviewed journals, e.g. the American Society for Nutrition and the American Journal of Clinical Nutrition.

A poor diet can have an injurious impact on health, causing deficiency diseases such as scurvy, beriberi, and kwashiorkor; health-threatening conditions like obesity and metabolic syndrome, and such common chronic systemic diseases as cardiovascular disease, diabetes, and osteoporosis.

Nutritional science investigates the metabolic and physiological responses of the body to diet. With advances in the fields of molecular biology, biochemistry, and genetics, the study of nutrition is increasingly concerned with metabolism and metabolic pathways: the sequences of biochemical steps through which substances in living things change from one form to another.

Carnivore and herbivore diets are contrasting, with basic nitrogen and carbon proportions being at varying levels in particular foods. Carnivores consume more nitrogen than carbon while herbivores consume less nitrogen than carbon, when an equal quantity is measured.

The human body contains chemical compounds, such as water, carbohydrates (sugar, starch, and fiber), amino acids (in proteins), fatty acids (in lipids), and nucleic acids (DNA and RNA). These

compounds in turn consist of elements such as carbon, hydrogen, oxygen, nitrogen, phosphorus, calcium, iron, zinc, magnesium, manganese, and so on. All of these chemical compounds and elements occur in various forms and combinations (e.g. hormones, vitamins, phospholipids, hydroxyapatite), both in the human body and in the plant and animal organisms that humans eat.

The human body consists of elements and compounds ingested, digested, absorbed, and circulated through the bloodstream to feed the cells of the body. Except in the unborn fetus, the digestive system is the first system involved. In a typical adult, about seven liters of digestive juices enter the lumen of the digestive tract. These digestive juices break chemical bonds in ingested molecules, and modulate their conformations and energy states. Though some molecules are absorbed into the bloodstream unchanged, digestive processes release them from the matrix of foods. Unabsorbed matter, along with some waste products of metabolism, is eliminated from the body in the feces.

Studies of nutritional status must take into account the state of the body before and after experiments, as well as the chemical composition of the whole diet and of all material excreted and eliminated from the body (in urine and feces). Comparing the food to the waste can help determine the specific compounds and elements absorbed and metabolized in the body. The effects of nutrients may only be discernible over an extended period, during which all food and waste must be analyzed. The number of variables involved in such experiments is high, making nutritional studies time-consuming and expensive, which explains why the science of human nutrition is still slowly evolving.

In general, eating a wide variety of fresh, whole (unprocessed), foods has proven favorable for one's health compared to monotonous diets based on processed foods. In particular, the consumption of whole-plant foods slows digestion and allows better absorption, and a more favorable balance of essential nutrients per Calorie, resulting in better management of cell growth, maintenance, and mitosis (cell division), as well as better regulation of appetite and blood sugar. Regularly scheduled meals (every few hours) have also proven more wholesome than infrequent or haphazard ones, although a recent study has also linked more frequent meals with a higher risk of colon cancer in men.

There are six major classes of nutrients: carbohydrates, fats, minerals, protein, vitamins, and water. These nutrient classes can be categorized as either macronutrients (needed in relatively large amounts) or micronutrients (needed in smaller quantities). The macronutrients include carbohydrates, fats, fiber, protein, and water. The micronutrients are minerals and vitamins.

The macronutrients (excluding fiber and water) provide structural material (amino acids from which proteins are built, and lipids from which cell membranes and some signaling molecules are built) and energy. Some of the structural material can be used to generate energy internally, and in either case it is measured in Joules or kilocalories (often called "Calories" and written with a capital C to distinguish them from little 'c' calories).

Carbohydrates and proteins provide 17 kJ approximately (4 kcal) of energy per gram, while fats provide 37 kJ (9 kcal) per gram, though the net energy from either depends on such factors as absorption and digestive effort, which vary substantially from instance to instance. Vitamins, minerals, fiber, and water do not provide energy, but are required for other reasons. A third class of dietary material, fiber (i.e., non-digestible material such as cellulose), is also required, for both mechanical and biochemical reasons, although the exact reasons remain unclear.

Molecules of carbohydrates and fats consist of carbon, hydrogen, and oxygen atoms. Carbohydrates range from simple monosaccharide (glucose, fructose, and galactose) to complex polysaccharides (starch). Fats are triglycerides, made of assorted acid monomers bound to glycerol backbone. Some fatty acids, but not all, are essential in the diet: they cannot be synthesized in the body. Protein molecules contain nitrogen atoms in addition to carbon, oxygen, and hydrogen. The fundamental components of protein are nitrogen-containing amino acids, some of which are essential in the sense that humans cannot make them internally. Some of the amino acids are convertible (with the expenditure of energy) to glucose and can be used for energy production just as ordinary glucose in a process known as gluconeogenesis. By breaking down existing protein, some glucose can be produced internally; the remaining amino acids are discarded, primarily as urea in urine. This occurs normally only during prolonged starvation.

Other micronutrients include antioxidants and phytochemicals, which are said to influence (or protect) some body systems. Their necessity is not as well established as in the case of, for instance, vitamins.

Most foods contain a mix of some or all of the nutrient classes, together with other substances, such as toxins of various sorts. Some nutrients can be stored internally (e.g., the fat soluble vitamins), while others are required more or less continuously. Poor health can be caused by a lack of required nutrients or, in extreme cases, too much of a required nutrient. For example, both salt and water (both absolutely required) will cause illness or even death in excessive amounts.

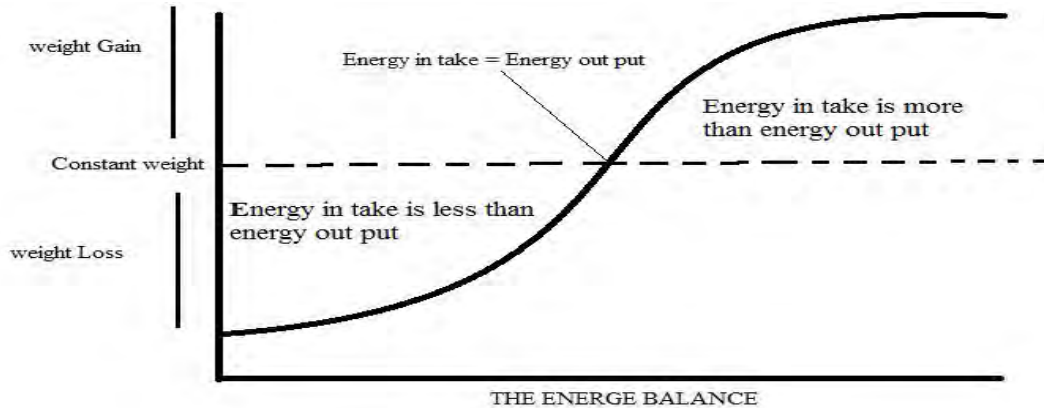


Chart 4: Energy balance (adopted from IAAF coaching manual 2008)

Sport nutrition before, during and after training/competition

Nutrition and hydration before training/completion

Smaller meals or snacks should be consumed the closer you get your exercise session. Just before exercise leg 10-15 minutes beforehand, water or a sports drink is best. Larger meals can be consumed when more time is available before exercise (Christopher D. Jensen 2005).

Time before exercise	Recommended Fuel/Hydration	Examples
Less than 30 minutes	Mostly liquids	Water/sports drink
30-60 minutes	Snacks and liquids	Energy gel, energy chews, energy bar, fruit, water/sports drink
1-3 hours	Snacks or small meal and liquids	Energy gel, energy chews, energy bar, sandwich, fruit, juice, water/sports drink
3-4 hours	Moderate-sized meal and liquids	Pasta with meat sauce, vegetables, fruit, roll, juice, water/sports drink

Table 2: Nutrition before training/competition (adopted from nutrition and Epidemiology research 2005)

Nutrition and hydration during training/completion

Drink fluids during exercise at a rate that prevents you from either losing more than 2% of your body weight or gaining weight due to excess fluid consumption. This averts dehydration and over hydration, both of which impair performance and can lead to serious health consequences.

Duration of Exercise	Weather Conditions	What to Rehydrate With
< 60 minutes	Moderate conditions	Water is usually fine
Any length	High temperature or humidity	Sports drink
≥ 60 minutes	All conditions	Sports drink

Table 3: Nutrition during training/competition (adopted from nutrition and Epidemiology research 2005)

Nutrition and hydration after training/completion

The benefits of a full and rapid recovery are more energy and better hydration leading in to your next workout or event and that means better performances and less chance of injury.

A good way to start recovery is to consume a carbohydrate rich, moderate-protein snack plus fluids and sodium within 15-30 minutes after exercise.

Within 30 minutes after exercise: snack examples:

- Fruit smoothie made with mango/banana/ berries and low fat or non fat milk or yogurt.
- Small roll or sandwich + low-fat chocolate milk + banana
- Fruit juice or vegetable juice + protein.

Type of Exercise	Carbohydrate Needs	Example of the Daily Carbohydrate Requirement for a 150-lb (68kg) Athlete
Low intensity	2.3-3.2 grams per lb (5-7 grams per kg)	345-480 grams
Moderate to high intensity	3.2-5.5 grams per lb (7-12 grams per kg)	480-825 grams
Extremely high intensity	4.5-5.5 grams per lb (10-12 grams per kg)	675-825 grams

Table 4: Nutrition after training/competition (adopted from nutrition and Epidemiology research 2005)

Carbohydrates

Toasted bread is a cheap, high calorie nutrient (usually unbalanced, i.e., deficient in essential minerals and vitamins, largely because of removal of both germ and bran during processing) food source.

Carbohydrates may be classified as monosaccharide, disaccharides, or polysaccharides depending on the number of monomer (sugar) units they contain. They constitute a large part of foods such as rice, noodles, bread, and other grain-based products. Monosaccharide, disaccharides, and polysaccharides contain one, two, and three or more sugar units, respectively. Polysaccharides are often referred to as complex carbohydrates because they are typically long, multiple branched chains of sugar units. The difference is that complex carbohydrates take slightly longer to digest and absorb because their sugar units must be separated from the chain before absorption. The spike in blood glucose levels after ingestion of simple sugars is thought to be related to some of the heart and vascular diseases that have become more frequent in recent times. Simple sugars form a greater part of modern diets than formerly, perhaps leading to more cardiovascular disease. The degree of causation is still not clear; however Simple carbohydrates are absorbed quickly, and therefore raise blood-sugar levels more rapidly than other nutrients. However, the most important plant carbohydrate nutrient, starch, varies in its absorption. Gelatinized starch (starch heated for a few minutes in the presence of water) is far more digestible than plain starch. In addition, starch that has been divided into fine particles is also absorbed more readily during digestion. The increased effort and decreased availability reduces the available energy from starchy foods substantially and can be seen experimentally in rats and anecdotally in humans. Additionally, up to a third of dietary starch may be unavailable due to mechanical or chemical difficulty. Carbohydrates are not essential to the human diet, as they are relatively low in vitamins and minerals, and energy can be provided from excess fats and proteins in the diet.

Protein

Most meats such as chicken contain all the essential amino acids needed for humans. Protein in nutrition. Proteins are the basis of many animal body structures (e.g. muscles, skin, and hair). They also form the enzymes that control chemical reactions throughout the body. Each molecule

is composed of amino acids, which are characterized by inclusion of nitrogen and sometimes sulphur (these components are responsible for the distinctive smell of burning protein, such as the keratin in hair). The body requires amino acids to produce new proteins (protein retention) and to replace damaged proteins (maintenance). As there is no protein or amino acid storage provision, amino acids must be present in the diet. Excess amino acids are discarded, typically in the urine. For all animals, some amino acids are essential (an animal cannot produce them internally) and some are non-essential (the animal can produce them from other nitrogen-containing compounds). About twenty amino acids are found in the human body, and about ten of these are essential and, therefore, must be included in the diet. A diet that contains adequate amounts of amino acids (especially those that are essential) is particularly important in some situations: during early development and maturation, pregnancy, lactation, or injury (a burn, for instance). A complete protein source contains all the essential amino acids; an incomplete protein source lacks one or more of the essential amino acids.

It is possible to combine two incomplete protein sources (e.g. rice and beans) to make a complete protein source and characteristic combinations are the basis of distinct cultural cooking traditions. Sources of dietary protein include meats, tofu and other soy-products, eggs, legumes, and dairy products such as milk and cheese. Excess amino acids from protein can be converted into glucose and used for fuel through a process called gluconeogenesis. The amino acids remaining after such conversion are discarded.

Fat

A molecule of dietary fat typically consists of several fatty acids (containing long chains of carbon and hydrogen atoms), bonded to a glycerol. They are typically found as triglycerides (three fatty acids attached to one glycerol backbone). Fats may be classified as saturated or unsaturated depending on the detailed structure of the fatty acids involved. Saturated fats have all of the carbon atoms in their fatty acid chains bonded to hydrogen atoms, whereas unsaturated fats have some of these carbon atoms double-bonded, so their molecules have relatively fewer hydrogen atoms than a saturated fatty acid of the same length. Unsaturated fats may be further classified as monounsaturated (one double-bond) or polyunsaturated (many double-bonds). Furthermore, depending on the location of the double-bond in the fatty acid chain, unsaturated fatty acids are classified as omega-3 or omega-6 fatty acids. Trans fats are a type of unsaturated

fat with trans-isomer bonds; these are rare in nature and in foods from natural sources; they are typically created in an industrial process called (partial) hydrogenation. There are nine kilocalories in each gram of fat.

Saturated fats (typically from animal sources) have been a staple in many world cultures for millennia. Unsaturated fats (e. g., vegetable oil) are considered healthier, while trans fats are to be avoided. Saturated and some trans fats are typically solid at room temperature (such as butter or lard), while unsaturated fats are typically liquids (such as olive oil or flaxseed oil). Trans fats are very rare in nature, and have been shown to be highly detrimental to human health, but have properties useful in the food processing industry, such as rancidity resistance.

Fibers

Dietary fiber is a carbohydrate (or a polysaccharide) that is incompletely absorbed in humans and in some animals. Like all carbohydrates, when it is metabolized it can produce four Calories (kilocalories) of energy per gram. However, in most circumstances it accounts for less than that because of its limited absorption and digestibility. Dietary fiber consists mainly of cellulose, a large carbohydrate polymer that is indigestible because humans do not have the required enzymes to disassemble it. There are two subcategories: soluble and insoluble fiber. Whole grains, fruits (especially plums, prunes, and figs), and vegetables are good sources of dietary fiber. There are many health benefits of a high-fiber diet. Dietary fiber helps reduce the chance of gastrointestinal problems such as constipation and diarrhea¹ by increasing the weight and size of stool and softening it. Insoluble fiber, found in whole-wheat flour, nuts and vegetables, especially stimulates peristalsis-- the rhythmic muscular contractions of the intestines which move digest along the digestive tract.¹ Soluble fiber, found in oats, peas, beans, and many fruits, dissolves in water in the intestinal tract to produce a gel which slows the movement of food through the intestines. This may help lower blood glucose levels because it can slow the absorption of sugar. Additionally, fiber, perhaps especially that from whole grains, is thought to possibly help lessen insulin spikes, and therefore reduce the risk of type 2 diabetes. The link between increased fiber consumption and a decreased risk of colorectal cancer is still uncertain.

Minerals

Minerals are the chemical elements required by living organisms, other than the four elements carbon, hydrogen, nitrogen, and oxygen that are present in nearly all organic molecules. The term "mineral" is archaic, since the intent is to describe simply the less common elements in the diet. Some are heavier than the four just mentioned, including several metals, which often occur as ions in the body. Some dietitians recommend that these be supplied from foods in which they occur naturally or at least as complex compounds, or sometimes even from natural inorganic sources (such as calcium carbonate from ground oyster shells). Some minerals are absorbed much more readily in the ionic forms found in such sources. On the other hand, minerals are often artificially added to the diet as supplements; the most famous is likely iodine in iodized salt which prevents goiter.

Macro minerals

Many elements are essential in relative quantity; they are usually called "bulk minerals". Some are structural, but many play a role as electrolytes. Elements with recommended dietary allowance (RDA) greater than 200 mg/day are, in alphabetical order (with informal or folk-medicine perspectives in parentheses):

- Calcium, a common electrolyte, but also needed structurally (for muscle and digestive system health, bone strength, some forms neutralize acidity, may help clear toxins, provides signaling ions for nerve and membrane functions)
- Chlorine as chloride ions; very common electrolyte; see sodium, below
- Magnesium, required for processing ATP and related reactions (builds bone, causes strong peristalsis, increases flexibility, increases alkalinity)
- Phosphorus, required component of bones; essential for energy processing
- Potassium, a very common electrolyte (heart and nerve health)
- Sodium, a very common electrolyte; not generally found in dietary supplements, despite being needed in large quantities, because the ion is very common in food: typically as

sodium chloride, or common salt. Excessive sodium consumption can deplete calcium and magnesium, leading to high blood pressure and osteoporosis.

- Sulfur, for three essential amino acids and therefore many proteins (skin, hair, nails, liver, and pancreas). Sulfur is not consumed alone, but in the form of sulfur-containing amino acids

Trace minerals

Many elements are required in trace amounts, usually because they play a catalytic role in enzymes. Some trace mineral elements (RDA < 200 mg/day) are, in alphabetical order:

- Cobalt required for biosynthesis of vitamin B12 family of coenzymes. Animals cannot biosynthesize B12, and must obtain this cobalt-containing vitamin in the diet
- Copper required component of many redox enzymes, including cytochrome c oxidase
- Chromium required for sugar metabolism
- Iodine required not only for the biosynthesis of thyroxine, but probably, for other important organs as breast, stomach, salivary glands, thymus etc. (see Extra thyroidal iodine); for this reason iodine is needed in larger quantities than others in this list, and sometimes classified with the macro minerals
- Iron required for many enzymes, and for hemoglobin and some other proteins
- Manganese (processing of oxygen)
- Molybdenum required for xanthine oxidase and related oxidases
- Nickel present in urease
- Selenium required for peroxidases (antioxidant proteins)
- Vanadium (Speculative: there is no established RDA for vanadium. No specific biochemical function has been identified for it in humans, although vanadium is required for some lower organisms.)

- Zinc required for several enzymes such as carboxypeptidase, liver alcohol dehydrogenases, and carbonic anhydrase

Vitamins

- As with the minerals discussed above, some vitamins are recognized as essential nutrients, necessary in the diet for good health. (Vitamin D is the exception: it can be synthesized in the skin, in the presence of UVB radiation.) Certain vitamin-like compounds that are recommended in the diet, such as carnitine, are thought useful for survival and health, but these are not "essential" dietary nutrients because the human body has some capacity to produce them from other compounds. Moreover, thousands of different phytochemicals have recently been discovered in food (particularly in fresh vegetables), which may have desirable properties including antioxidant activity; however, experimental demonstration has been suggestive but inconclusive. Other essential nutrients that are not classified as vitamins include essential amino acids, choline, essential fatty acids, and the minerals discussed in the preceding section. Vitamin deficiencies may result in disease conditions, including goiter, scurvy, osteoporosis, impaired immune system, disorders of cell metabolism, certain forms of cancer, symptoms of premature aging, and poor psychological health (including eating disorders), among many others. Excess levels of some vitamins are also dangerous to health (notably vitamin A), and for at least one vitamin, B6, toxicity begins at levels not far above the required amount. Deficient or excess levels of minerals can also have serious health consequences.

Water

- Water is excreted from the body in multiple forms; including urine and feces, sweating, and by water vapor in the exhaled breath. Therefore it is necessary to adequately rehydrate to replace lost fluids. Early recommendations for the quantity of water required for maintenance of good health suggested that 6–8 glasses of water daily is the minimum to maintain proper hydration. However the notion that a person should consume eight glasses of water per day cannot be traced to a credible scientific source. The original water intake recommendation in 1945 by the Food and Nutrition Board of the National

Research Council read: "An ordinary standard for diverse persons is 1 milliliter for each calorie of food. Most of this quantity is contained in prepared foods." More recent comparisons of well-known recommendations on fluid intake have revealed large discrepancies in the volumes of water we need to consume for good health. Therefore, to help standardize guidelines, recommendations for water consumption are included in two recent European Food Safety Authority (EFSA) documents (2010): (i) Food-based dietary guidelines and (ii) Dietary reference values for water or adequate daily intakes (ADI). These specifications were provided by calculating adequate intakes from measured intakes in populations of individuals with "desirable osmolarity values of urine and desirable water volumes per energy unit consumed." For healthy hydration, the current EFSA guidelines recommend total water intakes of 2.0 L/day for adult females and 2.5 L/day for adult males. These reference values include water from drinking water, other beverages, and from food. About 80% of our daily water requirement comes from the beverages we drink, with the remaining 20% coming from food. Water content varies depending on the type of food consumed, with fruit and vegetables containing more than cereals, for example these values are estimated using country-specific food balance sheets published by the Food and Agriculture Organization of the United Nations. Other guidelines for nutrition also have implications for the beverages we consume for healthy hydration- for example, the World Health Organization (WHO) recommend that added sugars should represent no more than 10% of total energy intake.

The athlete's food I/II level coaching manual

As the statement by Dr. Bezebeh Wolde, carbohydrates are a major energy source during intense training for whatever type of physical activity. Every field of activity requires energy to fulfill the desired goal. The amount of calorie lost by training must be gained by having appropriate type of food, unless it may cause negative effect up on the athlete during each season of the task.

athletes must keep careful watch on his/her diet, avoiding fatty foods, starches and fried dished on the day of the meets, he/she should eat a substantial, energy producing meal five or six hours before he runs, then eat very lightly food two hours 2.30hours prior to the race. (Earl "Bud" Myers 1965:43)

The Energy Balance

A person should eat and drink the number of calories to supply the energy their body requires. The average person has basic energy requirements to maintain the body through normal daily activities like sleeping and breathing. The athlete has these basic energy requirements plus the energy needed to train and compete. A typical growing adolescent might need about 2500 calories of energy per day for basic energy requirements. He may need an additional 500 calories for a training session. So, a young athlete's daily energy needs can be 3000 (2500 + 500) calories, or more.

The performance of an athlete who does not take in sufficient calories will be reduced. When the calorie supply is constantly low the athlete will lose weight as he uses up the energy stored in the body. A person who takes in too many calories will store any amount more than the body requires as fatty tissue. This non-essential fat in the body, which was discussed in the chapter on Developing Physical Fitness, will also reduce performance.

This energy balance is important for successful training and competition. Any steady rise or fall in weight or, more importantly non-essential fat, should be checked by the coach. A doctor should be seen if eating or exercise habits are not the obvious cause.

The Energy Systems

According to IAAF II coaching description, the three metabolic energy systems operating in our bodies provide the energy we need to contract muscles. These energy systems operate continuously and it is how long and how hard we do whatever physical activity that determines which system contributes most. The three energy systems are:

Aerobic Process

➤ The Aerobic System

The muscle energy system which requires oxygen

Anaerobic Processes

➤ **The Lactate System**

The 'linking' energy system which is capable of operating without oxygen and produces lactate and acid

➤ **The ATP-CP System**

The stored, start-up energy system which is capable of operating without oxygen and uses 'CP' as fuel but does not produce lactate or acid.

Aerobic Energy – The Endurance Energy System

The aerobic system requires oxygen. This system is emphasized in lower intensity exercise and is the basic system which provides the energy for most human activity from birth to death. As such it is also important in recovery from exercise of all intensities. It is very efficient and does not produce waste products. The heart and lungs are important in aerobic activity as oxygen and fuel are carried to the muscles in the blood.

The aerobic system resists fatigue. It takes longer to overload than either of the other two energy systems.

Training the aerobic energy system must be a minimum of a total of 20 minutes duration. The work load for aerobic training can be either continuous or broken up into repetitions of harder and easier running or exercise. Correct aerobic training will improve aerobic energy production in the muscle and also improve the efficiency and function of the heart and lungs, the oxygen transport system.

Lactate Energy System – The 'Linking' Energy System

The lactate energy system is called the 'linking' system because it provides the bridge between the capabilities of the aerobic and ATP-CP systems. In the late 1990s our understanding of how the body produces metabolic energy changed dramatically. As a coach you are probably aware that lactic acid can form when you're exercising, particularly when it's an intense activity. You may believe, or have been told, that it only forms when you 'run out of oxygen', that it is a useless waste product, that the burning sensation that comes, for example, from a long, fast sprint is caused by this lactic acid. You may also believe that the soreness that comes the day after a

hard training session is again caused by lactic acid and that massage will help to get rid of this waste product.

ATP-CP Energy System – The ‘First 10 Seconds’ Energy

The ATP-CP system is the one referred to as the ‘stored’ or ‘start-up’ energy system. This system provides the majority of energy when our athletes do bursts of high speed or high resistance movements lasting up to 10 seconds. The stores of energy, ‘CP’, in the muscle which are The ATP-CP energy system is developed by alternating periods of work and rest. The work time should be very intense, usually of 2-8 seconds and should not exceed 10 seconds, as this is the limit of the energy system. The rest periods should be 2 to 3 minutes, depending on the duration of intense activity, to allow the muscle energy, CP, stores to build up again. If an athlete shows the effects of fatigue, allow more rest time or decrease the work time. e used up in the intense burst of activity return to normal levels within 2-3 minutes of rest.

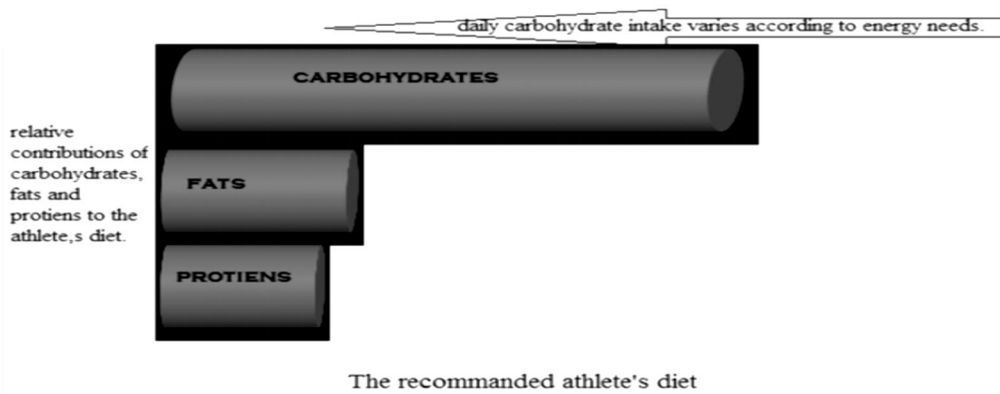


Chart 5: Recommended athlete’s diet (adopted from IAAF coaching manual 2008)

There are food substances necessary to the runner. Even though the percentage is not high as carbohydrates such as proteins and fats.

For athletic performance and for good health sport scientists recommend a diet that includes more carbohydrate, less fat and less protein (60%,20% and 15%)respectively are the high performance diet, such as potatoes, corn, beans, rice, and whole grained cereals, breads and pastas.(R. Marthen 1997:125)

CHAPTER THREE

METHOD AND PROCEDURE

3. RESEARCH DESIGN AND METHODOLOGY

3.1 RESEARCH METHODOLOGY

Since the aim of the research is up to describing facts and telling on the existing condition of the issue under discussion i.e. The problem and prospects of Tirunesh Dibaba Athletics Center in developing young athletes for national level, descriptive survey research method is used.

3.2 SOURCES OF DATA

The primary sources of data used for this study were, athletes, coaches and stakeholders. The secondary sources are:- legal documents, internets, relevant books and IAAF coaching manuals.

3.3 SAMPLE AND SAMPLING TECHNIQUES

3.3.1 SAMPLES

For the specific research the following sample were selected using available and non-probability (purposive) sampling. Out of 4 athletics sport centers Tirunesh Dibaba Athletics sport center, was selected. From the total number of 150 young athletes (14 male and 11 female) 5 coaches 1 stakeholder from the athletics center and 1 official from Ethiopian athletics federation were taken as samples for the study.

3.3.2 INSTRUMENT OF DATA COLLECTION

For this specific study the following data collecting instruments were used, the interview and questionnaire were translated in to Amharic based on their appropriateness.

1. Questionnaire

- open ended
- close ended

2. Interviews

- open ended
- formal

3. Document analysis

- observation of athletes and coaches profiles
- documents at the sport center was analyzed

3.3.3 PROCEDURE OF DATA COLLECTION

In conducting the study the following relevant procedures in collecting data were used. First relevant data were assessed to get information from what we have been done in relation to the problem.

Second before distributing the prepared questionnaire to respondents it was tested as a pilot at the sport center with relevant athletes and coaches. Then the questionnaire was revised depending up on suggestion collected during the try out and administer to the concerned respondents so that they will fill and return them back. In administer the questionnaire research assistants had the necessary orientation on how to distribute and collect questionnaire. A prior contact was made with respondents to ensure willingness to participate in the study and to minimize the return rate of questionnaire.

Interview was held at the respondent work place.

3.3.4 METHOD OF DATA ANALYSIS

The information obtained from relevant opinion gathered through questionnaire well structure, organized and framed to suit analysis and inference or conclusion. When interpreting the data percentage were used to questions that require quantitative measurements. And descriptions were used to qualitative measurements. Accordingly some tables were used in tabulating the results. Finally based on the findings and conclusions reached recommendation were proposed as a research out put.

CHAPTER FOUR

FINDINGS, INTERPRETATION AND DISCUSSION

4.1 FINDINGS

Result obtained from athletes, coaches, stakeholders and officials from Ethiopian Athletics Federation and results from documents analyzed were tabulated and interpreted as follows.

N.B The sequence of the question arranged in to a manner that facilitates the right and meaningful interpretation and discussion of the findings. So that there will be some questions being omitted in the sequence of quantitative interpretation and moved to qualitative interpretation.

4.2 INTERPRETATION

Quantitative Interpretation of Data

I. Questionnaire filled by young athletes

Q1. How did you join the sport center?

No	Options	%
1	After winning a competition	32
2	Recruiting from projects	56
3	Through different way	12

Table 5: How trainee joins the center

According to the above table 32% of the respondents join the sport center after winning the competition where as,56% of them were recruited from different projects while the rest 12% were joined the center through different means's.

Q3.Did you get special benefits after joining the center?

No	options	%
1	Yes	100
2	No	0

Table 6: Getting special benefits after joining the center

The above table indicates that all the athletes i.e. 100% of them benefits a lot after joining the center.

Q5. Do you the center over comes the problem of Ethiopian athlete succession?

No	options	%
1	Yes	87
2	No	13

Table 7: The center overcomes the problem of Ethiopian athlete succession

As the above table shows almost all or 87% of the athletes believe that the problem of succession will be overcome while the rest 13% due to several reasons they believe that the problem will not be solved.

Q6. Do you clearly understand the objective of the center?

No	options	%
1	Yes	100
2	No	0

Table 8: Understanding of the athletes about the center

The above table shows that all the athletes (100%) were clearly understand the objective of the center and they are working to it.

Q7. Do you really believe that the center works towards its goal?

No	options	%
1	Yes	78
2	No	22

Table 9: The center works towards its goal.

As it shown in the above table 78% of the respondent positively agreed and believed that the center working towards the attainment of its goal but the rest 22% do not believe in the attainment of the sport center goal.

Q8. Are there favorable conditions for training in the sport center?

No	options	%
1	Yes	96
2	No	4

Table 10: Favorable conditions for training in the center

As it shown in the above table 96% of the respondents believed that there are conducive conditions for training in the center and the rest 4% of the respondents said that there is lack of conducive conditions.

Q9. Do you believe that you have a progressive performance advancement?

No	options	%
1	Yes	83
2	No	17

Table 11: Athletes performance progression

The above table shows that 83% of the trainee marked a progressive performance change while the rest 17% said that they do not notice any advancement in performance.

Q10. Is there any educational training provided in the center?

No	options	%
1	Yes	91
2	No	9

Table 12: About educational training provided for athletes in the center.

As it shown in the above table 91% of the trainee said that they came across with different educational training beside to that of practical training while the rest 9% of the trainee said that there is no educational trainings given in the center.

Q12. Relation with your coach

No	Options	%
1	Excellent	62
2	V. good	10
3	Good	28

Table 13: The relationship b/n coaches and trainee in the center

According to the above table 62% of the trainee had an excellent relationship with their coaches and 10% of trainee had a very good relation with their coaches while the rest 28% of the trainee said that they had a good relation with their coaches.

II. Questionnaires filled by coaches

Q1. Are you qualified?

No	Option	%
1	PhD	-
2	Msc	20
3	Bsc	80
4	Diploma	-
5	Certificate	-
6	Other	-

Table 14: Level of qualification

According to the above table 80% of coaches are Bsc degree holders, where as 20% of the coaches are only masters degree graduate. .

Q2.Evaluation on the problem and prospects of sport center in developing new athletes

No	Options	%
1	Extremely high	20
2	Very high	60
3	High	20
4	Moderate	--

Table 15: The problem and prospects of sport center in developing young athletes

According to the above table 20% of the coaches believe that the contribution of sport center in developing new athletes are extremely high and 60% of them said that the centers contribution in developing young/new athletes is very high where as 20% of the coach said that the centers had high contribution in developing young athletes.

Q4. Do the center have an appropriate materials and equipments to carry out the training?

No	options	%
1	Yes	60
2	No	40

Table 16: Training materials and equipment in the sport center

As it's indicated in the above table 60% of the coach said that the center had equipped with an appropriate materials and equipments, where as 40% of the coach said that the center lack materials and equipment.

Q5. How competent are the coaches in the center?

No	options	%
1	Very high	--
2	High	80
3	Moderate	20

Table 17: How competent are the coaches in the center

According to the above table majority of the coach which is 80% are highly competent or qualified where as the rest 20% are moderately qualified.

Q6. Are the center organize training and courses for coaches?

No	options	%
1	yes	100
2	No	0

Table 18: Organization of training and courses for coaches in the center

According to the above table all the coaches are confirmed that the center organizes different training and courses for them.

Q7. Are their favorable conditions for training in the center?

No	options	%
1	yes	100
2	No	0

Table 19: Favorable conditions for training in the center

As indicated in the above table all the coaches said that there are favorable conditions in the center.

Q8. Do you encourage trainees to give comments on the process of the training?

No	options	%
1	yes	40
2	No	60

Table 20: Encourage trainees to give comments on the training process

From the above table the following conclusion has been obtained it is 40% of the coaches said that they provide chances for the trainee to comment on the process, where as majority of the coaches(60%) did not encourage the trainees to comment on the process.

Q9. Do you like your current coaching position?

No	options	%
1	yes	80
2	No	20

Table 21: A coach like current coaching position

According to the above table 80% of the coaches were very happy in their current coaching position and the rest of 20% of them were not happy in their current coaching position.

Q10. Do you provide appropriate nutrition for trainees that related with the training?

No	options	%
1	yes	100
2	No	0

Table 22: Providing appropriate nutrition for trainees

As it's indicated in the above all the coach said that they provide appropriate nutrition for trainees according to the training,

III. Questionnaires for Stakeholders

Q1. Are there criteria for recruiting athletes while joining the center?

No	Option	%
1	Yes	100%
2	No	-

Table 23: Criteria for recruiting athletes while joining the center

According to the above table almost all or 100% of the stakeholders said that they had a criteria of recruiting trainers while joining the center.

Q3. What are the criteria for recruiting coaches?

No	Options	%
1	Academic level	100%
2	Experience	-
3	Other	-

Table 24: Criteria for recruiting coaches

The above table show that all the stakeholders (100%) said that all the coaches for the center were recruited by their academic level and it is a criteria for staffing.

Q5. The efforts of the center towards achieving its goals

No	Option	%
1	Extremely high	100%
2	Very high	-
3	High	-

Table 25: The efforts of the center towards achieving its goal

As the above table shows 100% of the stakeholders said that the centers had a marvelous effort towards achieving their goals.

Q6. How the relationship between coaches and the trainee?

No	Option	%
1	Excellent	33.3
2	V. good	66.6
3	Good	-

Table 26: The relationship between coaches of the trainee

According to the above table 66.6% of the stakeholders said that the relationship between coaches and the trainee are very good while 33.3% of the stakeholders further raised the relation as excellent.

Qualitative Interpretation of Data

The following are data that are qualitatively interpreted after gathering them through questionnaire.

I. Questionnaire for trainees

Q2. Weather the athlete /trainee/ joins the center in different way:

Some of the athletes /trainees/ joined the center through talent identification rather than being recruiting from projects and after winning competitions.

Q4.What are the benefits?

All respondent are positively confirmed that best performance athletes have got a chance to join clubs, national team, and also can get international chances in competition.

Q11. Weather the training contributes a lot in the life of the trainees.

Majority of the respondent positively confirmed that the training specially on life skill and educational trainings provided by the center played a great role in their life and helped them a lot.

II. Questionnaire for Coaches

Q2. When coaches answered for the question regarding to the criteria of the center when accepting new trainees, majority of them said that the center set its own criteria while recruiting trainees. And beside there are some important consideration regardless of training competition and being recruiting from different projects after observing the trainees performance progression. So this consideration is talent identification some selected stakeholders and coaches go through different regions of Ethiopia and observe different regional competitions and tournaments to identify individuals with different and unique talents and then using that means athletes are recruited to join the center. So far these method was believe to be very important and hope fully it will be implemented in a large scale for the future.

III. Questionnaire for Stakeholders

Q2. All concerned bodies or stakeholders respond for the question regarding to criteria of trainee selection.

Recruiting them from projects after observing their level of performance progression, gathering an information from project coaches and by analyzing their profiles.

Recruiting them from different project competitions focusing on their effectiveness on the competition.

Beside ‘talent identification’ has been used they also said that talent identification is found to be an important means for staffing the trainee and it will be implemented and carried out in a well

structured manner for the future because the result obtained from it is very alarming and it helps the center to investigate different means of training for different creates which most of the projects are neglecting.

Q4. Is there anything that the center is doing to enhance improve qualities of the coaches.

For the above questions the stakeholders respond as: They:

- Organized different short term coaching causes in cooperation with federation to update coaches and being them familiar with new things.
- Providing sponsorship for coaches to update themselves educationally and practically to develop their knowledge.

Qualitative Interpretation of Interviews

I. An interview for Ethiopian Athletics Federation Officials

The interview was asked for a responsible official of Ethiopian athletics federation and the response given by the official has been interpreted below.

N.B. The interview has been conducting following an appropriate procedure.

Q1. What will be the contribution of Tirunesh Dibaba sport train center in the production of new elite athletes?

The official responded for the question by saying ‘great’!! The center is considered to be one of the hope for Ethiopia specially for the production of new elite athletes and the federation hope is laying on the center of course there are different athletics clubs that can take a line share but form what we observe with in these short period of time the biggest line share goes to the center.

Q2. What are the support that the federation provide for the center?

The official responded that well in every technical aspects as well as lay organizing different training courses like international officiating and coaching priority will be given for coaches that are working in the center there is because as far as our hope is in the center, we believe that it will help them to be familiar with different and new skills on how to provide training and to let their trainees familiar with different new rules and regulation.

Q3. Is there a job integration between the federation and the center?

The official replied definitely there is an integration of jobs if it is not so their will be so many fallacies between the two so far there is no fallacies these shows that they are working in an integrated form and the yearly plans of the federation and the center are parallel.

Q4. What are the mechanisms that the federation follow to supervise the activities of the center?

The official said that we are collecting their reports on every activities and also they organize and invite as to observe their activities that means we are able to supervise their activities through invitation and visiting the activities.

Q5. How did you evaluate the result what the center obtained from nation wide competitions?

The official replied that was fantastic and that is why the biggest line share was given to the center as it is noticed the center obtained a fascinating result and every clubs are surprised by that and I hope if they persist in these way in every year the center will be main being the champion.

Qualitative Interpretation on Document Analysis

The analysis on documents are generalized as follows:-

- There was well planned annual and specific training plans that every coaches were following
- There was different charts, clearly stated objectives, goals missions of the center.
- Every coaches are qualified with BA and above.
- The trainees are recruiting from different regions of Ethiopia and it can be said that the center is a “small Ethiopia”
- There was a consciously designed and prepared nutritional manuals and different written documents on every activities taking place in the center.

4.3 DISCUSSION ON THE FINDINGS

The following core points are derived from the qualitative and quantitative interpretation of the collected data.

4.3.1 How to Join the Center?

In table 5, 56% of the respondent said that they were recruited from projects to join the training centers. Besides in table 23 all the stakeholders said that they had criteria for recruiting trainees and one of its is recruiting athletes/trainees/ from projects based on their profile. This indicates that recruiting trainees from projects considering their profiles and an information obtained from project coaches are very important for shaping young new talented athletes.

4.3.2 Presence of Conducive Training Facilities and Equipment

In table 10, 96% of the trainees responded that there were favorable conditions for, training and also in table 16, 60% of the coaches confirmed that the center is equipped with facilities for training these shows that providing training with favorable equipments and materials will help athletes to develop their performance and help the center to reach and met its goal easily.

4.3.3 Provision of Educational Training and Causes

In table 12, 91% of the trainee said that the center provide them with different educational and technical trainings where as in table 18 all the coaches (100%) said that the center provide different courses and trainings to update themselves from this point it is possible to conclude that providing different educational trainings and causes will help both the trainee and coaches to update themselves and became competent.

4.3.4 Relation between Coaches and Trainees

In table 13, 62% of the trainee said that they has an excellent relation with their coaches and in table 26, 66.6% of the stakeholders also said that the trainees had a very good relation with their coaches so from these point the assumption having a positive relation with or creating a very good relation between trainees and coaches will enhance the success of the trainees, coaches and the training center in general.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

As the concern of the study is to find out the contribution of Tirunesh Dibaba sport center in developing young athletes for the national levels different topic has been discussed so far they are:

1. Presence and conduciveness of training facilities and equipments.
2. The contribution of the sport center in developing young athletes.
3. Appropriateness of the training for trainees performance development.
4. Qualification and coaching knowledge of coaches.
5. Positive relationship between coaches, trainees and stakeholders.
6. Appropriate nutritional guides for the trainees.

The above points were found out being determinant to the effectiveness and efficiently of the training process.

5.2 Conclusion

The following conclusions are given based on the findings of the study.

1. Using talent identification as one means of staffing trainees are very important in promoting athletes with different skills.
2. The presence of conducive training environment and situations contribute a lot in helping trainees to develop their performance and as well help coaches to implement what they have that leads them to success.
3. Providing different education and technical training will help both the trainee and coaches to benefit a lot and it also contribute in advance for the national level.
4. Maintain positive relationship between coaches, trainees, stakeholders are very vital for success.

5. The sport center has worked towards achieving its goal by procuring training for new young and talented athletes through scientific methods.
6. Providing an appropriate training based on scientific methods will help the athlete /trainees/ to benefits many things and enable coaches to be provide of what they are done.
7. Having a good number of coaches to the number of athletes, /trainees/ which can applies scientific methods of coaching to the training process, such as:- proper training plan, nutrition, observe individuals progression and providing feedback based on their improvements.
8. Providing an appropriate nutritional guides for the trainees.

5.3 Recommendation

Based on the findings, the following recommendation were given believing that the contribution of Tirunesh Dibaba athletics center in developing young athletes for national level will be seen.

1. The qualification of coaches should be improved. So that coaches can became familiar with new ideas, rules methods and regulation of coaching.
2. Using talent identification as one means of staffing trainees should be encouraged.
3. Trainees should involve or provide chances to comment on the training program.
4. The center should provide different chance for professional developments for both coaches and trainees.
5. The center should provide an appropriate nutritional guides for the trainees.
6. The Ethiopian Athletics Federation and other concerned bodies should work together in order to scale the athletic centers quality.

Generally it is clear that athletic Centers are community-based independent organizations where athletes have access to high level coaching plus a range of sport education and personal development programs. It is better to link different and modified coaching approaches to produce young and elite athletes for national level.

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Appendix 1

Questionnaire for Athletes

Sex_____

Age_____

Experience at the center_____

1. How did you join the sport center?

After wining a competition Recruiting from project Through different way

2. If you join the project in other way please explain it.

3. Did you get a special benefit after joining the sport center?

Yes No

4. If yes what are the benefits?

5. Do you the center over comes the problem of Ethiopian athlete succession?

Yes No

6. Do you clearly understand the objective of the sport center?

Yes No

7. Do you really believe that the center works towards its goal?

Yes No

8. Are there favorable conditions for training in the sport center?

Yes No

9. Do you believe that you have a progressive performance advancement?

Yes No

10. Is there any educational training provided in the center?

Yes No

11. If so what is the contribution of the training in your life?

12. Relation with your coaches.

Excellent V. good Good

Appendix 2

Questionnaire for coaches

Sex _____

Age _____

Years of Experience _____

1. Are u qualified?

PhD Msc Bsc Diploma Certificate Other

2. Evaluation on the contribution of sport center in developing new athletes.

Extremely high Very high High Moderate

3. What are the criteria for recruiting athletes while joining the center?

4. Do the center have an appropriate materials and equipments to carry out the training?

Yes No

5. How competent are the coaches in the center?

Very high High Moderate

6. Are the center organize training and courses for coaches?

Yes No

7. Are their favorable conditions for training in the center?

Yes No

8. Do you encourage trainees to give comments on the process of the training?

Yes No

9. Do you like your current coaching position?

Yes

No

10. Do you provide appropriate nutrition for trainees that related with the training?

Yes

No

Appendix 3

Questionnaires for Stakeholders

Position_____

Qualification_____

1. Are there criteria for recruiting athletes while joining the center?

Yes No

2. If yes what are the criteria to select athletes/trainees?

3. What are the criteria for recruiting coaches

Academic level Experience Other

4. Is there anything that the center is doing to enhance improve qualities of the coaches. _____

5. The efforts of the center towards achieving its goals

Extremely high Very high High

6. How the relationship between coaches and the trainee?

Excellent V. good Good

Appendix 4

Interview questions for Ethiopian Athletics Federation Officials

Position_____

Experience in years_____

1. What will be the contribution of Tirunesh Dibaba sport train center in the production of new elite athletes?
2. What are the support that the federation provide for the center?
3. Is there a job integration between the federation and the center?
4. What are the mechanisms that the federation follow to supervise the activities of the center?
5. How did you evaluate the result what the center obtained from nation wide competitions?

Addis Ababa University
School of Graduates Studies

Declaration

This thesis is my original work, has not been presented for degree in any other university and that all sources of material used for the thesis have been duly acknowledged

Name

Bewket Ayenew

Signature

Approved by

Ato Mebratu Belay (asso.pro.)

Advisor

Signature