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Factors in the design and implementation of programmes that will attract, recruit, retain and develop young athletes

By Lyle Sanderson

ABSTRACT

Athletics is in competition with other sports for talented young performers. To survive it must attract large numbers of participants and keep them interested. One approach has been to give talented young athletes a taste of success and recognition through high profile competitions in the hope that this will inspire them to continue and develop. However, the early specialisation and ambitious competition programmes required for success can work against the realisation of an athlete's full potential, creating a conundrum for the sport. In this article, first given as a presentation at the 2002 International Athletic Foundation Workshop on Youth Athletics, the author says that the sport must address entry-level programmes, the application of growth and development knowledge, the issue of enjoyment, and appropriate competition programmes. He then outlines strategies for addressing key issues, including the roles of coaches, teachers and parents. He concludes with recommendations, including that the IAAF should produce guidelines for appropriate competition events and training practices for each stage of a young athlete's development.

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Introduction

The challenge facing athletics today goes beyond talent identification. To assure the continued success of the sport strategies of TALENT ENTRAPMENT, that will get potential athletes involved and keep them involved, must be developed and implemented. Attracting large numbers of children to athletics is obviously important, but the failure to keep those that have been attracted involved through adolescence and early adulthood is the real problem in most nations and systems.

We are in a time of rapid change in society, change that is having great impact on sport. In much of the world the situation is very different than was the case when the majority of the world-class athletes of today

entered sport as children. Many sports are demanding year around specialised training at increasingly younger ages. The situation is described well by BROWN and ELLIOTT (2001) when they state that "All sport governing bodies seek to enrich their pools of talented young athletes, with the goal of eventually producing World and Olympic champions. The recruitment and retention of these young athletes becomes fierce competition among sports..."

If athletics is to maintain and improve its place in this highly competitive environment, changes must be made that will make the sport an attractive option for children when they select activities. Appropriate coaching methods are needed to retain these athletes as they progress through the phases of development toward high performance. BUSSMANN (1999) emphasises the importance of the coach in the retention of athletes. Coach education and certification methods must be planned and implemented in a way that will develop coaches who are trained to meet the needs of children and youth.

BROWN and ELLIOTT (2001) draw attention to the way that other sports use special teams and competitions to recruit and retain talented young athletes. WANGEMANN (2001) states that "...competition; it is the life-blood of the sport." He goes on to emphasise that "It is clear that it is the duty of an IAAF Member Federation to ensure that there is a strong national programme of competition opportunities for all levels of athlete – from schools and club meetings to the elite level." If athletics is to compete successfully for talented young athletes the competitions in the sport must be meaningful and exciting to the participants.

Athletics is faced with a conundrum. It is generally accepted, and is supported by the work of HARRE (1985), that early specialisation should be avoided and that a broad based multi-lateral approach should be followed until after the athlete has completed puberty if later success is to be realised. And yet other sports that compete for the athletic talent are providing high level, and in some cases international competition, for very young performers. The possibility of qualifying for these high level competitive opportunities is an important inducement to highly motivated talented young athletes and the athlete's parents when selecting the sport that the child will join. When designing programmes we must balance what we know about growth and development with the need for programmes and competitions that will attract and retain athletes.

The importance of entry level programmes

The first exposure to a sport is often the defining factor in the participant choosing to continue in the sport. A good experience at the entry level often leads to a lifelong interest in the activity. It is critical that athletics programmes at the entry level are well designed and presented in a manner that will provide an enjoyable experience. The potential participants are computer age kids. The designers of computer games have capitalised on the need for challenge. For some children and youths, the need for challenge that would have resulted in sport participation is satisfied by computer games. Programmes must be designed to provide an appropriate level of challenge to a wide range of abilities.

The activities that are included in programmes for pre-pubescent children are important to the athlete's long-term development. These are the skill hungry years. THUMM (1987) points out that the developmental stages before puberty are best suited for movement learning. He goes on to state "... children have at their disposal natural capacity for learning and taking things in besides a pronounced mobility and motivation.... In no other developmental phase can the rough form of a movement be acquired faster..."

The importance of understanding and applying growth and development knowledge

Children are not scaled down or miniature adults. Many coaches fail to understand and apply the available knowledge of growth and development. This results in inappropriate training activities being utilised. Failure to understand the high degree of variability in the rate of maturation among pre-pubescent and pubescent children has resulted in methods and programmes that lead to late developers being "turned off" and early developers being ill prepared for the time when they will no longer dominate just because they are "big and strong for their age".

There is no evidence that early developers will be better athletes than late developers when they reach adulthood. In fact, there is some evidence that suggests that late developers have more long-term potential. The differential rates of growth of body segments suggest that late developers will have a higher centre of gravity in adulthood. It is thus important that programmes are developed in a way that will retain late developers.

Perhaps the most striking example of a late developer being missed comes from basketball where Michael Jordan, arguably the greatest player in history, was cut from one of the first teams for which he tried out.

It has been known since the results of the early longitudinal growth and development studies were published that there is a high degree of variability among pre-pubescent and pubescent children. We know that the stages of development are established and occur in a predictable order but we cannot predict when any given individual will enter each stage or how long it will take to progress through that stage.

Figure 1 illustrates the wide variation in development of both males and females. In both instances the latest developer in the study had not entered puberty, as defined by MARSHALL and TANNER (1969, 1970) using secondary sex characteristics, at the chronological age when the earliest developer had completed puberty. It should also be noted that the latest developing female had not completed puberty until almost two years after the latest developing male had reached this stage.

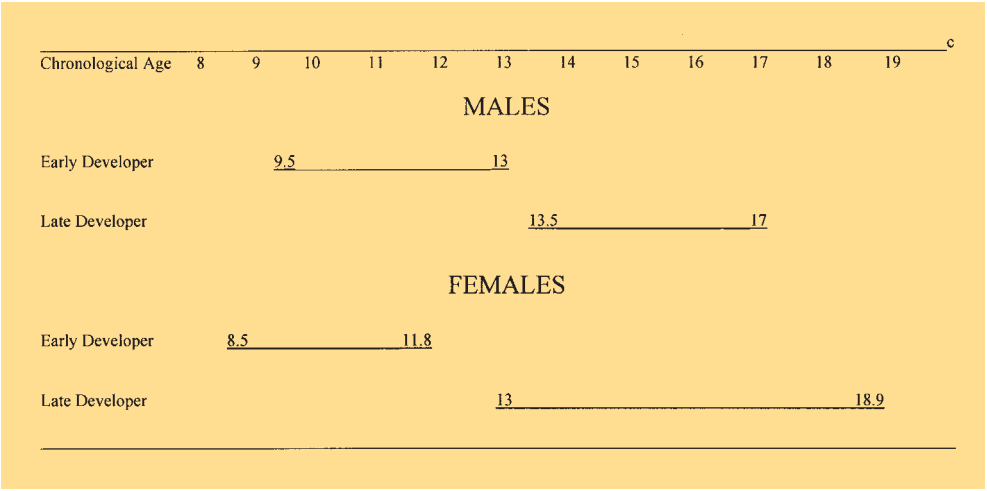

Figure 1: Length of puberty for earliest and latest developers
Based on data published by MARSHALL and TANNER, Institute of Child Health of London (1969, 1970).

The preceding example illustrates the situation as it relates to physical growth and development. In addition to physical growth and development, motor development, cognitive development and socio/emotional development are taking place through predictable phases but at independent rates in each pre-pubescent and pubescent individual.

Figure 2 illustrates an example of the matrix of maturation of a hypothetical twelve year old. This individual is typical of those that might be identified in a talent finding programme. The child is advanced by more than a year in physical development and is also advanced in motor development. On the other hand, cognitive development and socio/emotional development are well behind that expected of a twelve year old. This individual is likely to have difficulty coping with social situations.

We have had the essential knowledge concerning growth and development available for more that thirty years and yet:

(i) The coaching literature and coach education manuals, methods and materials make little or no reference to the high degree of variability in rates of growth and maturation;

(ii) Chronological age is still the major method of classifying participants in competition for children and youth resulting in the bigger stronger early developers dominating;

(iii) Most talent identification systems are based on measurements that favour early developers; and

(iv) In many instances little is done to help children and teenagers understand the quite normal changes that are taking place that have significant impact on performance.

The last point is particularly important when dealing with females as they progress through the stages of development. Much of the coaching literature states that girls develop one and a half to two years earlier than boys. This is generally true based on averages, however this does not take into account the high degree of individual variability that exists. Late developing girls are

Chronological Age				12				
Physical Development	10		11		12		13x	14
Motor Development	10		11		12	x	13	14
Cognitive Development	10	x	11		12		13	14
Socio/Emotional Development	10	x	11		12		13	14

Figure 2: Matrix of maturation for a hypothetical twelve year old

often even more disadvantaged than late developing boys because coaches believe that the girls should be more advanced. Girls do often experience rapid improvement in the early stages of puberty. A problem emerges when the girls reach the stage of puberty where hormonal changes take place that result in the widening of the hips with the resultant lowering of the centre of mass. Performance levels often stagnate or deteriorate at this time.

After an extensive review of the literature BAILEY et al. (1987) found that females need more time than males to adapt to adolescent changes in body composition and proportion. They state that "At early post adolescent ages they (females) may, in fact, be less well equipped than males to withstand the training loads associated with high level performance...." If girls are not given the counselling that will help them understand this quite normal phenomenon they are likely to become discouraged and drop out of sport.

There is a need to provide training that will prepare coaches to better deal with children and youth. Much more emphasis must be given to ensuring that the coaches being trained have a full understanding of growth and development related issues. It is important that those in charge of developing and implementing coach education and training programmes understand that the majority of the coaches in these programmes will be dealing with children and youth.

The importance of enjoyment

Fun and enjoyment are the most powerful motivators in attracting and retaining participants. Society projects the concept that games such as football are fun but athletics with a high percentage of time spent training, is work. This does not have to be the case. Participant enjoyment is a feature of successful programmes. Training with a group can be an enjoyable and rewarding experience if the sessions are well designed with the needs and abilities of the participants in mind.

Coaching practices can make participation challenging and enjoyable. Coaching styles can build or destroy self-esteem. Coaches must be trained to provide programmes in a way that is enjoyable and motivating to the individual athletes. As CLEMENT (1997) states "The coach's job is to structure and fine-tune workouts to produce a guaranteed success. Athletes succeed on success."

Competition programmes

Competition that provides a recognisable development path is a vital need. Young athletes entering the sport must have appropriate and enjoyable entry level competitions available. These should be structured in a way that will provide fun and success to a wide range of abilities. As the athletes develop, progressively higher levels of competition that provide appropriate challenges are vital to retention. WANGEMANN (2001) states that "It is the task of the national federations and Area associations to ensure that there is an achievable and realistic pathway to the top..."

Possible solutions for attracting and retaining young athletes

1. Coach education and training at all levels must be designed so that coaches understand the factors effecting children and youth and are given the information and tools needed to deal with younger athletes.

Most current athletics coach education provides training in activities and methods that are appropriate to adults when the majority of the coaches being trained will spend a significant portion of their coaching involvement working with children and youth. The methods of training coaches must be critically examined and change implemented where required.

Athletics Canada, in cooperation with the Coaching Association of Canada, is

attempting to address this situation. A committee, including both coaches and sport scientists, is developing a Participant Development Model (PDM) for track and field in Canada. The aim is to understand who the participants are and their needs. Based on this, coach education will be structured to meet the needs of the identified groups as they progress through the system from the entry level to the elite level. The concept is to identify the needs of the participants through the stages of development and prepare the developing coaches to meet these needs.

2. Information to coaches, teachers and parents must be provided in an interesting and usable manner.

Current examples of how this can be done include:

- The easy to use book Straight Talk About Children and Sport – Advice for Parents, Teachers and Coaches (1987), published by the Coaching Association of Canada, is designed with the hope that better informed parents, teachers and coaches will lead to better experiences for kids in sport.

- The powerful video Coaching the Spirit of Sport – Building Self-Esteem (1995) distributed by the Canadian Centre for Ethics in Sport is an example of an attempt to educate through technology.

- A legacy of the 2001 IAAF World Championships of Athletics is Run Jump Throw and away we go!. This innovative project provides a well-designed resource that fits with the Kindergarten to Grade 12 school curriculum in the province of Alberta. Resources are provided to introduce the programme to teachers. The material was designed by a committee of teachers working with Dr. Linda Blade who is a qualified IAAF Lecturer and has a strong background in growth and development.

- A unique programme in Puerto Rico, which provides government money to pay the cost of highly qualified professionals who conduct seminars for the parents and coaches of children's sport, could serve as a model for other countries.

3. Athletics must work to establish and maintain strong links with schools at all levels.

Teachers influence children and have an important role in motivating children to become involved in sport. The Run Jump Throw – away we go! programme is an example of the type of assistance that is needed by school systems to improve the level of athletics instruction in the schools. A positive experience at the instructional level could be a factor in motivating children to compete in athletics.

In North America, school based programmes often provide the first competitive athletics experience for children. It is important that the teachers and coaches who work at this level have available the resources that are needed to conduct good programmes. It is important that athletics federations at the local and state level provide easily accessible opportunities for teachers to attend clinics and access information. Co-operation of the schools and the local clubs with the governing body can lead to quality competitive opportunities for school based athletes.

4. Programmes that involve parents in the child's sport have great potential.

The Little Athletics Programme in Australia is an example of such a programme. The philosophy of Little Athletics is "family fun and fitness through athletics." Children from the ages of 6 to 14 take part in parent organised

training sessions and competitions. It is reported on the Australian Little Athletics Union website that ninety-nine thousand seven hundred and eighty-eight (99,788) Australian children took part in Little Athletics in 2001. A number of the members of the Australian senior team credit the enjoyment that they experienced in Little Athletics to be an important factor in their decision to pursue a career in athletics.

5. Innovative strategies must be developed to reduce the problems associated with chronological age based programmes.

Ideas with potential include:

- Programmes that reward participants for technical development rather than absolute performance have great potential to both provide opportunities for success and to enhance skill learning (See WENSOR, 1996).
- Combined event and multiple event competition programmes can be used to emphasise individual improvement. Is encourages participants to compare their performances with their own previous results.
- Competitions that group participants based on ability rather than chronological age can provide a challenge to early developers who are grouped with older competitors. At the same time late developers compete with children of similar ability and have a higher likelihood of success.
- Programmes at the club and school levels must be designed to meet the needs of a wide range of abilities. This will increase the likelihood of the participants experiencing an enjoyable group experience that will keep athletes of a wide range of abilities, including late developers, involved.

Recommendations

1. The IAAF Coaches Education and Certification System should be modified to place more emphasis on preparing coaches to coach children and youths.

2. The IAAF programmes outlined by WANGEMANN (2001) must receive continued support and further programmes to enhance the quality of competition at all levels should be developed and implemented. This should include incentives for national federations and Area associations to organise and implement programmes "...to ensure that there is a strong national programme of competition opportunities for all levels of athlete – from schools and club meetings up to the elite level."

3. The IAAF should provide programmes and materials that national federations can use to encourage improved and appropriate athletics instruction in schools.

4. The IAAF should develop a programme structure that can be used as a template to develop parent organised and administered entry level athletics.

5. The IAAF must develop guidelines that outline appropriate competition events and practices for children and youth at each stage of the individual's development. These guidelines must strike a balance between the long-term development of the participants and the need for competitions that will attract and retain athletes.

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