British Judo Association, Suite B, Loughborough Technology Centre Epinal Way, Loughborough, LE11 3GE

www.britishjudo.org.uk











www.britishjudo.org.uk

UDITIERY UK Sport **sport**scotland

©British Judo Association in conjunction with SportEngland and sportscotland

ACKNOWLEDGEMENTS



The Long Term Player Development (LTPD) plan for judo was produced by a working group that included:

Dr Lisa Mclver Dr Istvan Balyi, PacificSport, Vancouver Graham Ross, SportEngland Colin McIver, Head of Technical, British Judo Association Mark Beecher, Head of Operations, British Judo Association Dr Andrew Moshanov, Technical Director, British Judo Association Clive Brewer, **sport**scotland

Neil Bowes, consultant for **sport**scotland

The British Judo Association (BJA) would like to thank all the coaches (especially those who attended the initial workshops), players, volunteers, employees, administrators and friends who provided support, assistance, expertise, enthusiasm and advice throughout the LTPD project.

The Long Term Player Development plan for judo is based on the LTAD model developed by Dr Istvan Balyi. We would like to thank him for his expertise and guidance that he contributed throughout this project.

For further information on LTPD please contact:

British Judo Association Suite B Loughborough Technology Centre Epinal Way Loughborough LE11 3GE Email: bja@britishjudo.org.uk Website: www.britishjudo.org.uk 2008 2nd Edition

Acknowledgements

Contents

Foreword Introduction

Why do we need L

The 10 key factors

Fundamentals stage

Prestart - Learning

Start - Training to t

Potential - Training

Performance - Com

Retainment

Implementation of

Conclusion

Glossary of terms

References

Appendix I – Physica emotional developr

Appendix II - BJA lo development frame

Appendix III - LTPD periodisation charts

Appendix IV - Playe

: MIRA



CONTENTS

	1
	2
	3
TPD?	4
influencing LTPD	5
e	12
to train stage	13
rain stage	14
to compete stage	16
npeting to win stage	18
	19
LTPD	20
	21
	22
	23
al, mental and cognitive, ment characteristics	24
ong term player ework	30
trainability and s	35
er pathway	37



Photography by David Finch, Mike Varey, Bob Willingham.



FAREWORD



I am delighted to provide this foreword for this important piece of work. I am a major proponent of the principles of the Long Term Player Development model and have consistently spoken out against the culture of over-competing that engulfs many of our best clubs. Young people need to develop a wide range of technical expertise in a nurturing and fun-filled environment. The importance of keeping it enjoyable for young players cannot be overstated.

The judo season is long. It can be difficult to keep it interesting for 11 months of the year with a varied and wide ranging programme. LTPD planning in judo is all about balance and technical excellence. This is an important concept for the successful development of young players.

We need to ensure our coaches are highly trained and well positioned to deliver this balance and technical range.

The LTPD model is based on proven scientific principles of human growth and development and allows us to support our young players throughout a clearly defined pathway to achieve success on the world stage. It is a framework that allows judo to work to achieve three aims:

- START - To give more people the opportunity to play the sport
- STAY - To keep more players in the sport
- SUCCEED To achieve medal success on the world stage

The competitive nature of the sport implies that only a few athletes will remain in the elite programme by the time they reach senior level. However, it should be remembered that LTPD is not just an elite model but is a model that provides a solid foundation for all players at all ages and levels, allowing long-term participation and enjoyment.

For British Judo, the implementation of LTPD provides a clear path for player and program development throughout the country. It reflects the unique nature of player development in judo and it identifies the most appropriate methodologies and structures to support both excellence in performance and life-long benefit to individuals who are involved in this sport.

In all sports, there is a tendency to take a special talent and make it burn too bright too early – ultimately burning out before the realisation of full potential. We need to think about a future BJA in which special talents (and all players) are nurtured and slowly moved through the ranks, with the right balance of technical input, conditioning, and competition.

This document provides an excellent framework on which to build our future player pathways.

Densign White

Chairman British Judo Association

INTRODUCTION

Long Term Player Development (LTPD) is about achieving optimal training, competition and recovery throughout a player's career, particularly in relation to the important maturation years of young people. It is a player-centered approach to achieving optimal development so that the player can reach their full potential throughout all stages of their career.

Pioneered by Dr Istvan Balyi, the model represents a six stage progression, with each stage having a specific relationship to the important biological, psychological and social development periods in a young person's life. The process emphasises the role of quality preparation and delivery mechanisms, matched to key criteria based on individual development, and focused upon episodes and performance over the long-term rather than focusing on winning as a short-term ("peaking for the weekend") objective.

An LTPD approach is about encouraging all players, whatever their talents and motivation, to achieve their full athletic potential. It is not only about improving performance but also about encouraging lifelong participation in judo. This can only be achieved if the most appropriate and effective environments can be created in our clubs.

The main aim of the LTPD plan is to outline to coaches, parents, administrators and the judo community in Britain what a long term approach to training and preparation means. The plan gives detailed training and competition guidance that will be of assistance to judo providers in planning their programmes. This plan is based upon the realisation that not all children develop at the same rate.

"All young people follow the same pattern of growth from infancy through adolescence, but there are significant individual differences in both the timing and the magnitude of the change in structure" (Armstrong and Welsman, 1997).

The current training and competition programmes employed by the BJA are based on chronological age and this means that although players can be 3–5 years apart by maturation levels we train them in the same way (i.e. consider two players who are 13 years old, one could have a development age of 11 and the other 15, thus they are 4 years apart in maturation age). This is vitally important in judo as we traditionally select the more physically mature player that results in short-term outcomes being met rather than developing those who have the potential to be the senior players of the future.

LTPD is not something that we can implement directly into judo. It needs to cater for the recreational and competitive strands within our sport that includes judoka who fall outside the specified age ranges and for judoka who wish to progress but not necessarily to the elite level. Therefore, the aim is to create an integrated system that will enable:

- More opportunities for young people to participate in judo.
- More judokas retained in the sport.
- More judokas achieving their aspirations through a higher standard of performance.

LTPD supports players from the first day they step on the mat over a span of many years, providing a logical progression of programme planning and skill development from the young judoka to the experienced performer.









WHY DO WE NEED L TPD?

A number of general observations about various sporting systems both in this country and around the world have been made:

- Young athletes under train and over compete.
- Young athletes carry out adult training and competition programmes, which can be detrimental to development.
- The critical stages of physiological, social and emotional development in females can be ignored if they are exposed to male programmes.
- Early year training focuses on outcomes (winning) rather than on processes (optimal training).
- Competition encourages short term success which can lead to long term failure.
- Chronological age often dominates training and competition rather than maturation level/developmental age.
- Training not optimised at the early training ages results in athletes never reaching their full genetic potential.
- Fundamental movement and sport skills not taught properly.
- Players pulled in different directions by school, club, region and national team demands.
- The best coaches are encouraged to work at the elite level.
- Coach education does not cover the growth, development and maturation of young people.
- Competition structures and pressures within many sports, typically caused by early specialisation, can result in burn out and premature retirement.

More specific observations for judo are:

- Poor results at major championships.
- Inconsistent international performances.
- Competition based programmes rather than training based programmes.
- Little emphasis on skill development.
- Only a few professional coaches.

Many of these issues have been highlighted for years as fundamental flaws in our sporting structure. Despite this, there have been little changes to the current programmes. Now is the time to examine these programmes in more detail and look at changes, which could alleviate these problems.

Research proves that long term commitment based on sound scientific principles is needed for the production of elite athletes. To ensure optimum development through an athlete's career, a specific and well-planned training, competition and recovery programme must be in place.

The concept of LTPD has grown out of recognition of these facts and is core to everything we do. It is a framework encompassing every element of judo, which holds the player as the central focus of the sport.

There are a number of reasons for introducing a LTPD framework.

- Attract people to the sport of judo and retain them.
- Identify gaps in the current system and establish a clear player pathway. (Appendix IV)
- Provide integrated effective and enjoyable programmes for developing and performing players.
- Provide a planning tool to optimise performance.
- Achieve the goals outlined in the BJA development and performance plans.
- Develop programmes to encourage players with a disability.

1. The 10 year rule

Scientific research has concluded that it takes 10,000 hours of training (which is averaged over 10 years) to be world class at anything (Ericsson *et al.* 1993 and 1994). Athlete development is not a short term process and short term goals must not be allowed to undermine long term athlete development.

2. The FUNdamentals

Fundamental movement skills (agility, balance and co-ordination) and sports skills (running, jumping, throwing, kicking, catching and swimming) are the basis for all other sport. Children should develop these skills before the onset of their growth spurt in adolescence. An individual who is not competent in the basic movement skills will have difficulty participating in a range of sports and will have fewer opportunities for athletic success and lifelong enjoyment of physical activity. These movement and sport skills should be introduced through fun and games.

3. Specialisation

Sport can be classified as either an early or late specialisation. Early specialisation sports include gymnastics, diving and figure skating. Most other sports including judo are late specialisation sports. LTPD actively discourages early specialisation in a late specialisation sport. Specialising before the age of 10 in late specialisation sports contributes to imbalanced physical development, inadequate development of the full range of basic movement and sport skills, overuse injuries and burnout.

4. Developmental Age

LTPD is based on developmental age not chronological age. We all follow the same stages of development from early childhood through adolescence, but the timing, rate and magnitude of development differs amongst individuals. During late childhood and adolescence, players who are the same chronological age may be four to five years apart developmentally. Coaches need to understand these developmental differences and take them into account when they design training programmes.

The terms "growth" and "maturation" are often used together however, each refers to specific biological activities. Growth refers to observable step-by-step changes in quantity and measurable changes in body size such as height, weight and fat percentage. Maturation refers to qualitative system changes, both structural and functional, the body's progress toward maturity such as the change of cartilage to bone in the skeleton. (Figure 1)

Development

Development age refers to "the interrelationship between growth and maturation in relation to the passage of time. The concept of development also includes the social, emotional, intellectual and motor realms of the child".

Chronological age

Chronological age refers to the number of years and days elapsed since birth. Children of the same chronological age can differ by several years in their level of biological maturation.







Developmental age

Developmental age refers to the degree of physical, mental, cognitive and emotional maturity. Physical developmental age can be determined by skeletal maturity or bone age after which mental, cognitive and emotional maturity is incorporated.

Figure 1: Maturation in boys and girls

(Adapted from "Growing Up" by J.M.Tanner, Scientific American 1973, Source Canadian Sport for Life p.23)





LTPD requires the identification of early, average and late maturers in order to help to design appropriate training and competition programmes in relation to optimal trainability and readiness. Specific disabilities may dramatically change the timing and sequence of childhood and adolescent development.

Training age

Training Age refers to the age where players begin planned, regular and serious involvement in training.

5. Trainability

(Appendix III British Judo – Optimal trainability)

All physiological systems are always trainable, but there are critical periods in development when the body is particularly responsive to specific types of training. These periods are known as optimal windows of opportunity and are shown in Table 1. To reach their genetic potential players need to do the right type of training at the right stage. Otherwise, they can still be very fast, but they will never be as fast as they might have been. They cannot recover fully from inadequacies in their early training.

The proposed system for LTPD would ensure that the coaches are equipped with the necessary knowledge and skills to help to maximise the potential of players at the appropriate stages of their development. This would be achieved through appropriately structured and monitored programmes. These programmes match periods in the developmental life of a young person with training methods that will maximise the effects of this training.

From the point of view of trainability there are four key phases in human growth and development:

- Late childhood
- Early adolescence (puberty)
- Late adolescence (puberty)
- Early adulthood

Adolescence is the period between the onset of the adolescent growth spurt and the attainment of adult maturity.

During these critical periods the young person should be exposed to specific types of training, especially during phases of rapid growth, and the types of training should change with patterns of growth. This is typically between the ages of 11 to 15 years for girls and 12 to 16 years for boys (figures 2&3). The development of the internal organs (important for aerobic and anaerobic energy metabolism) follows the same growth pattern as that of height. Changes in strength follow the growth pattern of body weight. Biological or developmental age is one of the major criteria to determine a body's biological readiness for different types of endurance and strength training. It is very important that correct posture and technique are established before load and intensity are progressed in strength training.

During puberty there can be significant differences between chronological age (age of the body in relation to time: years, months, days) and developmental age (level of biological maturity of the body). Indeed, developmental age can range from 9 to 16 years in a group of 13 to 14 year olds. Some early maturing athletes may have as much as a four-year physiological advance over their late maturing peers. The same may be said of the mental, cognitive and emotional development of the individual. All of these factors need to be incorporated into the long term plan if the child is to develop physical competence, positive self-perception and self-confidence to participate in sport. The onset of the major growth spurt and Peak Height Velocity (PHV*) are often used as markers of maturation levels. Tracking the rate of change in height can monitor this. It is important to measure this regularly, accurately and consistently. Before the onset of PHV it is recommended that height be measured monthly and after the onset of PHV a weekly measurement should be taken. These measurements should enable the identification of the onset of the adolescent growth spurt and PHV. For further information on monitoring growth refer to Ross et al. 1976.

At a young age early maturers have a significant biological advantage and are normally selected over late maturers. It is very important to educate late maturers to understand the reasons for this so as to retain them in the system. Eventually late maturers catch up and that can produce discouraging psychological pressures on the early maturers and often they will leave the sport. Successful senior players tend to be those who take a long term development approach with either average or late maturers, or players with high levels of physical and motor co-ordination. It is important that we convince early maturers of the need to work hard on certain areas (such as acquisition of skills) and that the advantage they hold is that they are more mature not better. It is also important that they understand when late maturers catch up it is due to growth and maturation and not a decline in the early maturer's ability.

*PHV is the major growth spurt and rate of height increase in adolescence.

Window	Boys	Girls
Fundamental movement skill development	Age 6 to 9	Age 5 to 8
Speed window 1	Age 7 to 9	Age 6 to 8
Specialist skill development	Age 9 to 12	Age 8 to 11
Stamina development	From the start of the growth spurt	From the start of the growth spurt
Speed window 2	Age 13 to 16	Age 11 to 13
Strength window 1	12 – 18 months after PHV	End of PHV
Strength window 2	No 2nd window for boys	Onset of menarche

Table 1: Optimal windows of trainability



	H				
	1			A. Helly	
					ľ
				R	
			-	2	
1016					5
	6	91	. Ye	24	1
	A	12	- Salar	1	
		100	-		
1	2				9
	Ne		J	1	
	Z			1	
	No. 1			1	
	No.				- SAN- U- AN
	AN AN AN				
				l	





Figure 2:

Maturity events in boys – PHV in boys is more intense than in girls and on average occurs two years later. Growth of the testes, pubic hair and penis are related to the maturation process. Peak strength velocity comes a year or so after PHV. Thus, there is pronounced late gain in strength characteristics of the male athlete. The whole developmental sequence for male athletes may occur two or more years earlier or later than average. Early maturing boys may have a four-year physiological advantage over their late-maturing peers. Eventually, the late-maturers will catch up when they experience their growth spurt (Ross et al, 1976).



Figure 3:

Maturity events in girls – PHV in girls occurs at about twelve years of age. Usually the first physical sign of adolescence is breast budding that occurs slightly after the onset of the growth spurt. Shortly thereafter the pubic hair begins to grow. Menarche, or the onset of menstruation, comes rather late in the growth spurt occurring, after PHV has been achieved. The sequence of developmental events may normally occur two or even more years earlier or later than average. (Ross et al, 1976)

Skill development

First window - Fundamental movement skill development

This occurs in boys aged 6 to 9 years and in girls aged 5 to 8 years. During this window children should be working on developing the basic movement skills of agility, balance and co-ordination. These can be developed through games and exercises that include the movements shown in Table 2.

Locomotive skills	Manipulative skills	Stability skills
Walking, running, hopping, jumping, leaping,	Throwing, kicking, punting, striking, volleying, bouncing	Bending, stretching, twisting, turning, swinging, floating
Galloping, sliding, skipping, climbing, spinning, gliding	Rolling, catching, trapping	Balance, body rolling, starting, stopping, dodging, inverted supports
	Spatial awareness	

Table 2: Fundamental movement skills

Second window - Specialist skill development

This window focuses in developing general support skills that form the foundation for any sporting development. A wide range of activity in various sports will help develop this aspect, including ball sports, team games, gymnastics/dance, athletics, water sports, racquet sports etc. The window for boys takes place between 9 to 12 years and for girls between 8 to 11 years.

Speed development

First window

Linear, lateral and multidirectional speed should be developed with five-second bursts. This develops the central nervous system and with it agility, quickness and the ability to change direction at speed. For boys the first window occurs between the ages of 7 to 9 years and for girls it occurs between 6 to 8 years.

Second window

Anaerobic alactic power and anaerobic alactic capacity interval training should be performed during this window using five to fifteen second sprints. For boys the second window occurs between the ages of 13 to 16 years and for girls it occurs between 11 to 13 years.

Stamina development

Optimal aerobic training begins with the onset of the growth spurt. Aerobic activity before this trains the child to become more economic in movement, but with little improvement in VO_2 max. However, at the onset of the growth spurt, the VO_2 max increases significantly and this development can be facilitated through correct training. The optimal window occurs at the onset of PHV. Aerobic capacity training is recommended before players reach PHV. Aerobic power should be introduced progressively after growth rate decelerates.

Strength development

Strength gains before this window occur because of improvements in movement efficiency, learning movement patterns and through improved muscle activation. The muscles do not increase in size because of training, but become more effective at doing their job. It is important that before a child reaches the strength window, they have learnt the correct etiquette for strength training and the movements of the exercises that will be expected during the window. Free weight lifting technique should be learnt with manageable weights to allow quality skill acquisition. At the start of the window, strength training should be performed 3 or 4 times per week with each session being no more than 30 minutes long. The optimal window of trainability is immediately after PHV or at the onset of menarche, while for boys it is 12 to 18 months after PHV.







Flexibility

When the normal growth spurt begins a sudden lengthening of the bones (firstly in arms and legs and then in the back), tendons, ligaments and muscles occurs. This can cause the body to become tight, stiff and prone to injury. It is important to include flexibility training into the young persons' training. Flexibility training, during and after the growth spurt should include dynamic mobility, static stretching and proprioceptive neuromuscular facilitation (PNF) exercises. Flexibility training sessions should be performed as sessions in their own right, rather than as part of the warm up, or on rest days.

All but the speed windows of opportunity are based around the adolescent growth spurt. To summarise:

- Before the growth spurt, children should focus their sporting activity on learning sporting skills in varied environments.
- During the growth spurt accelerated adaptation of the aerobic system occurs, and flexibility is important to help the growing body remain flexible and injury free.
- For girls, the optimal time for strength development comes at the end of PHV and the onset of menarche.
- For boys, the optimal time for strength development comes 12 to 18 months after PHV.

It is also important to realise that during this time hormonal and emotional changes are taking place as well as physical development. The late childhood to early adulthood characteristics of physical, mental, cognitive and emotional development, general consequences and the implications for coaches can be found in Appendix I of this document.

6. Physical, emotional, mental and cognitive development

At each stage, coaches should consider the physical, emotional, mental and cognitive development of each player, in addition to their physical development, when they plan training, competing and recovery programmes (Appendix I).

7. Periodisation

(Appendix III British Judo – Periodisation)

Simply put periodisation is time management. As a planning technique, it provides the framework for organising training (i.e. mode, frequency, intensity, volume etc.), competition and recovery into a logical and scientifically based schedule in order to achieve optimum performance at the required time. Periodisation plans that take into account growth, maturation and trainability principles should be developed for each stage of a player's development.

8. Competition planning

The system of competition makes or breaks a player. The competition system should support and be consistent with LTPD. Different stages of development have different requirements for the type, frequency and level of competition.

9. System alignment and integration

LTPD recognises that physical education, school sports, recreational activities and competitive sports are interdependent. It also recognises that enjoying a lifetime of physical activity and achieving athletic excellence are both built on a foundation of physical literacy and fitness. All elements of the sport system must be integrated and aligned with one another to achieve these goals.

Similarly, all parts of the BJA system – schools, clubs, regional and national – must be integrated and aligned with one another. Each element in the system plays a crucial role in the player's development. For the system to work well they must be mutually supportive, clear in their roles and responsibilities, and clear how they can contribute to "the bigger picture" of player development. Judokas will do best in a judo system that is seamless and based upon a consistent set of principles. LTPD allows judokas to identify opportunities available to them and to understand the pathway that they need to follow. If they want to compete at an elite level, they will know (in general terms) what type of training, competition and recovery they should be doing at each stage, when they should start to specialise in judo and what they need to do to move up the system. They (and their parents) will have the knowledge to advocate for programs, coaching and other services that will support their long term development. In a system where the various elements are integrated and aligned, judokas are less likely to "fall through the gaps".

10. Continuous improvement

The concept of continuous improvement is drawn from the respected Japanese industrial philosophy Kaizen. LTPD is based in the best available scientific research and observed evidence, but knowledge and understanding evolve. LTPD should be responded to, integrate and in some cases stimulate research and judo-specific innovations.

Stages of LTPD for judo

LTPD for judo describes the optimal development for a player who starts judo between the ages of 9 to 14 years and continues through to competing at an elite level. The early stages of development will be the same for all judokas. When the volume of training starts to increase during the Start (training to train) stage, the pathway of those who choose to compete at a high level will diverge from those who do judo for fitness and enjoyment. Any training, competing and recovery programme should reflect the goals of the player for whom it was designed.

It is proposed that BJA adopt a six-stage model of LTPD for judo that closely relates to the periods of trainability. If these windows of opportunity are not utilised then players will never reach their full athletic potential, even with scientifically designed remedial programmes. It is vital that coaches are aware of these critical periods of "accelerated adaptation" so that these windows of opportunity can be exploited to their full potential:

- FUNdamentals
- Prestart Learning to Train
- Start Training to Train
- Potential Training to Compete
- Performance Training to Win
- Retainment Retire and Retrain

At each stage specific principles and guidelines for physical, psychological, technical, tactical and ancillary (lifestyle management, competition programming, coaching factors, delivery mechanisms) development are identified. The national grading syllabus should also be used for technical direction.

The abbreviations LW, MW and HW are used to refer to lightweight, middleweight and heavyweight and they refer to the International Judo Federation weight categories at the relevant age.



FUNDAMENTALSSTAGE



Chronological Age: Male 6 to 10 years, Female 6 to 10 years **Objective:** Learn all fundamental movement skills (build overall motor skills).

Fundamental movement skills should be practised and mastered before sport-specific skills are introduced. The development of these skills, using a positive, fun and largely games based approach, will contribute significantly to future athletic achievements. Participation in a wide range of sports and physical activities is also encouraged. This emphasis on motor development will produce players who have a better trainability for long-term sport specific development. In the case of disabled judoka co-ordination and motor skills need to be developed through suitably adapted sports and activities.

Judo specific objectives:

- Introduction to wide range of throwing and holding skills with the emphasis on multi-directional movement (uke moving backwards, forwards, sideways, circle).
- Throwing skills should be done using a standard sleeve and lapel grip on both the left and right side.
- The concept of breaking the opponents balance should be introduced.
- Introduction and development of falling skills forward, back, both sides and rolling breakfalls.
- Introduction to basic groundwork using simple moves into holds, escapes and combinations.
- Basic transference from throwing using simple movement patterns.
- Incorporation of athletic and gymnastic skills into judo training.

Recommendations for training, competition and gradings

Weekly participation in 4 – 6 general sport and physical activity:

- Day to day activity (cycling, walking to school, disco dancing etc.).
- Other sports (i.e. gymnastics, athletics, swimming, trampolining etc.).
- School physical education.
- Social activities (i.e. football, games, skipping etc.).

Weekly participation in 1 - 2 judo specific sessions which should last between 45 - 60 minutes.

Competitions should be fun events and festivals for 9-10 year olds, once they have established good basic judo skills. There should be little or no emphasis placed upon winning. It should be based around multiple skillexperiences and have as much opportunity for team winning as often as possible.

Gradings: 2 - 3 non-competitive junior gradings per year.

Supplementary knowledge:

- Sport is fun and good for you!
- Introduction to good nutritional practice and enjoyment of healthy food (education for the parents).
- Understanding the role of personal hygiene and health.
- Introduction to core stabilisation training using medicine balls, Swiss balls and own body strength exercises. The aim of this is to effectively recruit the trunk musculature and then learn to control the position of the lumbar spine during dynamic movements.
- Optimise flexibility.
- Introduction to Japanese terminology*.
- Introduction to discipline and etiquette and understanding the sport ethos.

Learning to Train – "building technique"

Chronological Age: Male 9–12 years, Female 8–11 years Objective:

Learn all fundamental sports skills (build overall sports skills).

All fundamental movement skills should be further developed and general overall sports skills should be learnt during this phase. Bypassing the fundamental and sport-skill development phase is likely to be detrimental to the child's future engagement in physical activity and sport. This is also the first stage where the coach / sport needs to think about differentiation between males and females in terms of developmentally designed activities. If fundamental motor skill training is not developed between the ages of eight to eleven (females) and nine to twelve (males), a significant opportunity has been lost, which may compromise the ability of the young player to reach his/her full potential at later stages of development.

Judo specific objectives:

- Continued development of a wide range of multi-directional throwing (off one and two feet) and holding skills.
- Introduction to uchikomi drills standing and ground work shadow, static and dynamic.
- Early specialisation of personal techniques including development of some techniques on the weaker side.
- The suitability of techniques for person's build.
- The long term effects of the technique.
- Introduction to transition from tachiwaza to newaza.
- Introduction to combination and counter techniques.
- Introduction to gripping skills standard left and right, specific to technique.

Recommendations for training, competition and gradings

Weekly participation in 3-4 general sport and physical activity sessions:

- Day to day activity (cycling, walking to school, disco dancing etc.).
- Other sports (i.e. gymnastics, athletics, swimming, trampolining, rugby, football etc.).
- School physical education.
- Social activities (i.e. football, games, skipping etc.).

Weekly participation in 2-3 judo specific sessions that should last between 45 – 75 minutes.

- Competition: 2-4 per year Club events, Mini-Mon, Area Cadet, National Championships Competition should be well structured. The emphasis upon competition at this stage is upon development and opportunities for learning and expression.
- Gradings: 2-3 non-competitive junior gradings per year, competitive gradings could be introduced for more experienced players

Supplementary knowledge:

- Develop flexibility and optimise range of motion about the major joints.
- Development of Japanese terminology*.
- Introduction to knowledge of competition systems.
- Introducing more responsibility to good nutritional and hydration practice.
- Introduction to the concept of recovery and regeneration.
- Concept of healthy lifestyle.
- Development of core stabilisation training using Medicine balls, Swiss balls and own body weight exercises.

*Consider other forms of communication (Braille, large print, audiotape etc.)





STARTSTARE



Training to Train – "Building the engine"

Chronological age / developmental age: Male LW 12-16 years

Male MW 12-17 years Male HW 12-18 years Female 11-15 years

Objectives:

Build the aerobic base, build strength towards the end of the phase and further develop sport-specific skills.

This stage transcends the onset of puberty, and as such, this phase can be seen to have both pre-pubertal considerations and post-puberty considerations. Puberty refers to the somatic (body) and physiological changes that occur in young people as reproductive organs change from an infantile to adult state. This is associated with the onset of PHV, which provides the coach with a reference point for making informed decisions about the nature of the activities that a child is undertaking. This is the basic sport-specific skill and fitness development stage and during this stage there should be an emphasis on aerobic conditioning. This is the stage where there is greater individualisation of fitness and technical training. The focus should be on training for fitness preparation (high intensity, low volume). The nature of the sport of judo requires quickness, agility and power – ultra short interval training, with anaerobic and aerobic systems being developed. Greater emphasis can be put on anaerobic development towards the end of the stages, as players develop their anaerobic capabilities.

During competitions players play to win and to do their best, but the major focus of training is on learning the basics as opposed to competing. Training and competition ratios are optimised because too many competitions waste valuable training time and conversely, not enough competition inhibits the practice of technical/tactical skills and learning how to cope with the physical and mental challenges presented during competition.

Players who miss this phase of training will not reach their full potential, as the individualised development of potential will have been missed. The reason why so many players plateau during the later stage of their careers is primarily because of an over emphasis on competition instead of on training during this important period in their athletic development.

The Pre-start and Start phases are the most important phases of athletic preparation.

Judo specific objectives:

- Continued and further development of a broad range of judo skills.
- Introduction of armlocks and strangles.
- Continued development and further specialisation and development of own techniques.
- Development of transition from tachiwaza to newaza.
- Development of combination and counter techniques.
- Introduction to coping with and countering opposition style and gripping i.e. traditional, Japanese, Korean, French and Eastern European styles with one-sided, over-the-shoulder, wrap around grips and other technical derivatives from wrestling styles common for today's performance judo.
- Introduction and development of competition-specific techniques and tactics including use of the contest area
- Introduction to decision making i.e. anticipation of opponent's moves, not reacting but pro-acting and technical and tactical decision making.

Recommendations for training, competition and gradings

Weekly participation in 3-4 general sport and physical activity sessions including an introduction to judo specific conditioning i.e. ultra-short interval / circuit training, supervised free weight lifting:

- Day to day activity (cycling, walking to school, disco dancing etc.).
- Other sports (i.e. gymnastics, athletics, swimming, trampolining, rugby, football, netball etc.).
- School physical education.
- Social activities (i.e. football, games, skipping etc.).
- Weight training introduction to free weights including barbells, dumbbells, medicine balls and cables.
- Circuit training introduction to judo specific circuits.

Weekly participation in 5–7 judo specific sessions that should last between 45 – 90 minutes.

Gradings: 2	2-3 competitive junior /	' senior gradings per year.
-------------	--------------------------	-----------------------------

Supplementary knowledge:

- Development of personal responsibility for nutrition, hydration, recovery and regeneration, lifestyle management.
- Introduction to ancillary capacities- dynamic warm up/cool down, nutrition, hydration, taper and peak, recovery and regeneration, cultural and lifestyle.
- Towards the end of the stage, develop concept of tapering to peak performance.
- Introduction and education regarding doping control and substance abuse.
- Flexibility should be emphasised (very important in maturing individual) and developed.
- Knowledge and education regarding weight categories.
- Knowledge of BJA squad systems, performance development opportunities and competition pathways.
- Introduction to prehabilitation (prevention versus treatment) and injury management.



nd International Cadet.



PATENTIALSTAGE



Training to Compete

Chronological Age/developmental age: Male LW 16-20 years

Male MW 17-22 years Male HW 18-25 years Female LW 15-20 years Female MW 15-20 years Female HW 15-23 years

Objectives: Optimise fitness preparation and sport specific skills as well as performance (optimise the "engine", skills and performance).

This phase of development is introduced after the goals and objectives of the Training to Train stage have been achieved, when the athlete has reached physiological maturity (and females will have reached skeletal maturity, although this may not occur in males until they are 21-22).

During this phase, high intensity individual event-specific training should be provided to players year-round. Players, who are now proficient at performing both basic and sport specific skills, learn to perform these skills under a variety of competitive conditions during training. Special emphasis is placed on optimum preparation by modelling training and competition. Fitness programmes, recovery programmes, psychological preparation and technical development are now individually tailored to a greater degree. Coaches would employ diagnostic techniques (such as video analysis, performance reviews, fitness testing, etc.) to analyse individual strengths and weaknesses in depth. This allows an emphasis to be placed on individual preparation plans to address each player's identified individual strengths and weaknesses.

Judo specific objectives:

- Continued development of judo skills relevant to: the competition climate, rule changes, emergence of new styles, defenses, techniques etc.
- Development of specialisation of a player's own techniques with emphasis on competition specific skills and tactics.
- Encouragement of originality and innovation.
- Refinement of transition from tachiwaza to newaza.
- Development of coping with and countering opposition style and gripping.
- Further development of contest strategies and decision-making under pressure.
- Refinement of multidirectional combination and counter techniques.

A structured periodisation programme that enables the player to peak for major identified target competitions is recommended. Training periods, training (practice) competitions and target competitions should all be identified within this annual programme.

Recommendations for training, competition and gradings

Weekly participation in 5 - 6 fitness conditioning sessions which are judo specific and 5 - 9 judo specific and should last between 60 - 90 minutes. It is recommended that a minimum of 6 sessions for younger athletes and a maximum of 9 for older, full-time athletes.

Competition: 8-12 per year National and International Junior and Senior Gradings: 2-4 competitive junior / senior gradings per year

Supplementary knowledge:

- Optimise and maximise ancillary capacities through individualised routines dynamic warm up and structured cool-down, nutrition (including individual nutritional strategies and food preparation), hydration, tapering training to allow for peak performances, recovery (including the use of ice baths and swimming pool recovery sessions) and regeneration, cultural and lifestyle demands of performance sport.
- Optimise and maximise weightlifting and physical training techniques and their integration into the overall programme. At this stage it is important to clearly identify physical limitations and to work on them. Weight training sessions should include pulling, pushing/pressing and trunk exercises. It is very important that correct posture and technique are established before load and intensity can be progressed. It is necessary that strength be established before strength endurance begins.
- Introduction to weight control practices and the development of individual strategies to achieve this.
- Knowledge of BJA squads system and competition ranking systems.
- Optimise individual strategies for Injury prevention and be familiar with appropriate injury management procedures.
- There should be development of understanding and utilisation of performance analysis methodologies.
- Develop approaches to tapering to peak performance.
- Maintenance of flexibility to suit specific individual needs.









PERFORMANCE



Training to Win

Chronological Age: Male LW 20+ years Male MW 22+ years Male HW 25+ years Female LW 20+ years Female MW 20+ years Female HW 23+ years

Objectives:

Maximise fitness preparation and sport specific skills as well as performance (maximise "engine", skills and performance).

This is the final phase of athletic preparation. Athletes now show increased commitment to success in their sport, and this needs to be aided by parents and significant others, who can (and typically do) help to overcome setbacks that might get in the way of training and progress.

The player's entire physical, technical, tactical, mental, personal and ancillary capacities are now fully established and the focus of training has shifted to the maximisation of performance. Training methods, technical / tactical execution and decision-making strategies are refined for specialised performance development. This is aided by the continued use of diagnostic tools (video analysis, performance reviews, fitness tests, etc.) to aid the identification and monitoring of individual needs.

Judokas now peak for major competitions. Training is characterised by high intensity and relatively high volume. Frequent "prophylactic" (preventative) breaks that are typified by high volumes of recovery training and / or cross-training should be taken. These help to prevent physical and mental burn out, which is a common result of intensive competition training. The competitive pressure to keep winning after success also induces new stresses upon the athlete: Previously, all training efforts have been focused on the "getting there". Now the emphasis becomes "staying there", which has different implications for training needs and structure.

Judo specific objectives:

- Continued development and refinement of individual-specific techniques with emphasis on competition specific skills and tactics.
- Continued refinement of transition from tachiwaza to newaza.
- Further refinement of multi-directional combination and counter techniques.
- Refinement of coping with and countering opposition style and gripping.
- Further development of contest strategies.
- Continued encouragement of originality and innovation.

A structured periodisation programme that enables the player to peak for major identified target competitions is recommended. Training periods, training (practice) competitions and target competitions should all be identified within this annual programme.

Recommendations for training, competition and gradings

There should be weekly participation in 4–6 judo specific conditioning sessions and 5 - 12 judo specific sessions which should last between 60-120 minutes.

Competition:	Peaking for major championships and selection ever
Gradings:	2-4 competitive senior gradings per year.

Supplementary knowledge:

- Maximise individual approaches to ancillary capacities dynamic warm up and structured cooldown, nutrition (including individual nutritional strategies and food preparation), hydration, tapering training to allow for peak performances, recovery (including the use of ice baths and swimming pool recovery sessions) and regeneration, cultural and lifestyle demands of performance sport.
- Maximise weightlifting and physical training techniques and their integration into the overall programme. Weight training sessions could include progressions on pulling, pushing/pressing and trunk exercises. It is important to ensure that physical limiting factors are being addressed in an integrated training programme.
- Conditioning is judo specific; off mat sessions must tie in with judo sessions.
- The optimisation of effective weight control practices.
- Understand responsibility for healthy lifestyle role modelling and promotion.
- Maintenance of flexibility to suit specific individual needs.

RETAINMENT

Retire and Retrain

Age:	Own choice
Objectives:	To continue to be physically active in judo
	To continue to be involved in the judo community in another capacity.

This stage refers to the activities performed after a player has retired from competition and is keen to continue in judo for their health and enjoyment. Some may choose to move into sport-related areas that may include coaching, officiating, refereeing and administration. Others may choose to continue competing in the master's competition programme. In this case training, competition and recovery programmes should then reflect needs and goals of these players and should take into account how aging affects flexibility, strength and endurance.

The BJA will need to provide retraining for the judoka to enable them to apply their knowledge, expertise and experience to their given situation (e.g. coaching, officiating) within the sport. A specific module will be devised to help performers prepare and plan for the challenges and issues they will face with retirement from performance. Issues such as self-concept and motivation should be addressed. Performers should be encouraged to use existing psychological skills in their new environment.

nts as necessary.



IMPLEMENTATION OF L TOP

Investment in the implementation of LTPD will secure its success but will require support from the BJA and its members. The model needs to be accepted across the whole of judo.

Implementers and Facilitators:

- British Judo Association
- JudoScotland

- Regional and national squads Local authorities
- Welsh Judo Association
- Parents

• Coaches

• Administrators

Event organisers

- Northern Ireland Judo Federation
- Sports Councils
- Volunteers
- National Training Centre
- PlayersCompetitors
- Regional centres Clubs
- Schools
- This document is the first step in developing LTPD for judo. It provides an overview, which is to be used as guidance for judo parents and providers. It defines the principles of LTPD and outlines the framework of ages, stages, key objectives and outcomes.

Projects aligned to LTPD that the British Judo Association have completed are:

- The delivery of an LTPD module into all child protection and coach revalidation courses.
- The incorporation of the principles of LTPD into the coach education system.
- Revision of the domestic competition system to align it to the principles of LTPD.
- Restructuring of the Mon grading system to align it to the principles of LTPD.
- Revision of the performance pathway to align it to the principles of LTPD.

Further projects that the British Judo Association intends to undertake are:

- To continue to provide further information on the principles of LTPD to help support coaches, players, parents and clubs.
- To continue to add resource material to the LTPD section of the website.

LTPD is a dynamic concept which will be subject to review and change and the BJA welcomes feedback from coaches, players, clubs, parents, administrators, volunteers and others with an interest in the sport and LTPD. The BJA want to develop a useable plan that is based on the best information available and then adapt it as necessary.



the player a levels. Judo training, co time. This w to allow the and to enjo Good prepa LTPD is abo and aspects LTPD is the will be succ participants It makes set which will o succeed at t involvemen





LTPD is about taking a clear, long term, systematic approach, which is centered on the player and their individual needs at all levels. Judokas will benefit from the right training, competition and support at the right time. This will give them a good foundation to allow them to reach their athletic potential and to enjoy judo throughout their lives. Good preparation is crucial for success and LTPD is about good preparation for all stages and aspects of development.

LTPD is the foundation for a judo system that will be successful in terms of numbers of participants and medals at the highest level. It makes sense to invest in a framework, which will develop players who enjoy judo, succeed at the top level and have lifelong involvement in the sport.











Chronological age: The number of days, months and years that have elapsed since birth. Children within the same chronological age banding can differ by several years in their level of biological maturation.

Cognitive: Thought and decision-making processes that underpin the application of sporting skills.

Development: Refers to the interrelationship between growth and maturation in relation to the passage of time. The concept of development also includes the social, emotional, intellectual and motor realms of the child.

Developmental age: The individual's stage of development in relation to maturity. The integrated nature of growth is influenced by the interaction between genes, hormones, nutrients and the physical and psychosocial environments in which an individual lives. This complex interaction regulates the child's growth patterns, neuromuscular and sexual maturation and general development during the first 20 years of life.

Energy systems: Adenosine triphosphate (ATP) is the stored form of energy within the body. ATP will convert to ADP (adenosine diphosphate) and a free circulating phosphate. This conversion breaks the bond of the third phosphate, releasing the stored energy. This energy is used for all the life function of a cell. Similarly, energy can be restored for future use by reattaching a phosphate to the ADP. There are three energy system:

- Anarobic alactic system (AnA): There is a limited amount of stored energy (ATP) within the muscle cells. This is the energy of the AnA system, also known as the ATP-CT system. This system does not require oxygen and also has no by-products. Typically, there is sufficient ATP stored within the muscle to last several seconds. This system will be tapped out within 10-15 seconds of intense activity. The ATP provides instant energy to the working muscles.
- Anaerobic lactic system (AnL): Muscle glycogen is also stored in limited amounts within the muscle. When energy beyond what can be provided from the ANA system is needed, the carbohydrate glycogen breaks down into glucose and can then produce ATP. Due to the multiple steps to create energy, the AnL is a slower process than the AnA system. The system will typically provide energy for bouts of intense exercise lasting from 60-90 seconds. The conversion of muscle glycogen to ATP does not require oxygen but lactic acid is formed. Lactic acid can produce discomfort in the working muscles as well as limit performance.
- Aerobic system (AER): The AER system creates ATP in the mitochondria of the working muscle cells and the presence of oxygen is required. The AER system provides a continuous supply of energy, however it cannot tolerate higher intensities as the energy is not produced fast enough for such activity. Like the AnA system there are no metabolic waste products produced during the AER conversion of energy.

Flexibility: The range of motion possible about a joint or a series of joints.

22

Fundamental skills: These are observable as movement, manipulation and stability skills. These basic skills underpin all other sporting skills. A player with well-developed fundamental skills will have the basic ability to develop a wide range of sporting skills in a number of activities, leading to an increased chance of either becoming a life-long recreation participant or an elite performer.

Growth: Refers to observable step-by-step changes in quantity and measurable changes in body size such as height, weight and fat percentage.

Individualisation: Designing training programmes to suit the specific needs of an individual.

Lifestyle management: Capacities associated with the holistic management of a healthy lifestyle (for example, nutrition and hydration). These later build into ancillary capacities, which are holistic factors that impinge directly upon all aspects of sports participation and performance but which are not directly attributable to physical, psychological, technical or tactical performance variables.

Maturation: Refers to qualitative system changes, both structural and functional, the body's progress toward maturity such as the change of cartilage to bone in the skeleton.

Menarche: The onset of menstruation.

Mental: Capacities associated with the psychological demands of sport (for example, concentration, motivation and goal setting, ability to visualise, etc).

Peak Height Velocity (PHV): The period of maximum rate of growth in height during the adolescent growth spurt.

Peaking: This is the process of optimising preparation to provide the player-athlete with the best chance of achieving the most effective performance in target competitions.

Tactical: The application of skills in a performance context.

Tapering: This is the reduction of training volume (but not usually intensity) as competition approaches in order to allow the player – athlete to peak for target competitions.

Technical: The skills and techniques of a particular sport.

Trainability: This refers to the age where the athletes begin planned, regular, serious involvement in training.

Training variables: Training can be altered by the manipulation of the volume (how much is done), frequency (how often the training stimulus is applied), intensity (how hard the player– athlete is worked), duration (how long training stimulus is applied) or load (how much work is performed). Collectively these are known as the training variables.

V0₂ max: The highest volume of oxygen a person can consume during exercise.

Abbott, A. and Collins, D. (1998) British clients perspectives of sport psychologists in A. Abbott, D. Collins, R. Martindale and K. Sowerby. Talent identification and development: An academic review, a report for sportscotland by the University of Edinburgh

Armstrong, N. and Welsman, J. (1997) Young People and Physical Activity. Oxford University Press, Oxford

Balyi, I. And Hamilton, A.E. (2000) Key to success: Long term athlete development. Sports Coach, 23(1), 30-32

Balyi, I (2001) Sport system building and long term athlete development in Canada. The situation and solutions in Coaches Report. The official publication of the Canadian Professional Coaches Association. 8, No.1 pp 25-28

Balyi, I. (2002) A step by step planner for annual training, competition and recovery programmes. ATP, Victoria, Canada

Balyi, I. and Hamilton, A. (2003) Trainability in childhood and adolescence. FHS 20.

British Canoe Union Long term paddler development pathway 2nd edition (2005)

Canadian Sport for Life Long term Athlete Development Resource Paper

Ericsson, K.A., Krampe, R.T and Tesch-Romer, C. (1993) The role of deliberate practice in the acquisition of expert performance. Psychological review pp 363 – 406

Ericsson, K.A. and Charness, N. (1994) Expert performance: Its structure and acquisition. American Psychologist August 1994 pp 725–747

Gore, C. J. (2000) Physiological tests for elite athletes. Ed /Australian Institute of Sport, Human Kinetics, Leeds

Harrison, A.J., Watkins, J. and Farrally, M. (1983) Developing the fundamental motor abilities in young children with special reference to jumping ability. Scottish Journal of Physical Education 11 (1) pp 11–16

Kane, J.E. (1986) Giftedness in sport: in G. Gleeson (ed) The growing child in competitive sport Hodder and Stoughton pp. 184-204

Malina, R. M, Bouchard, C, and Bar-Or, O. (2004) Growth, maturation and physical activity. Human kinetics Moore, P.M., Collins, D., Burwitz, L. and Jess, M.C. (1998) The development of talent study. English Sports Council

Ross, W.D. Brown, S.R., Faulkner, R.A., Vajda, A.S. and Savage, M.V (1976) Monitoring growth in young skaters. Canadian Journal of Applied Sport Sciences, (1), 165. In McDougall, D.J., Wenger, H.A. and Green H.J. (1991) 269-270

Ross, W.D. and Meterfell-Jones, M. J. (1982) Kinathropmetry. Physiological testing of the elite athlete. In McDougall, D.J., Wenger, H.A. and Green H.J. Movement publications, Ithaca, N. Y. pp. 75–104

Rowing Cana Plan (2005)

Rushall, B. (1998) The growth of physical characteristics in male and female children. In Sports Coach, Vol 20 pp 25-27

Salmela, J.H., Young, B.W. and Kallio, J. (1998) Within career transitions of the athlete-coach-parent triad in P. Wylleman, and D. Lavelle (Eds.) Career transitions in sport: A source book for practitioners and researchers Fit Publication, Morgantown, VA

Stafford, I. and Balyi, I. (2005) Coaching for long-term athlete development. Sportscoach UK.

Stone, M.H. (2004) Individualising training for your athlete. 4th Annual sportscotland Strength and Conditioning Conference, Inverclyde National Sport Centre, Largs; May 2004

Stone, M.E. (2004) Training the female athlete. 4th Annual sportscotland Strength and Conditioning Conference, Inverclyde National Sports Centre, Largs; May 2004

The ASA long term athlete development (LTAD) framework for water polo (2005)

Viru, A. (1995) Adaptation in sports training. CRC Pres, Boca Raton. P310

Viru, A. Loko, J. Volver, A. Lanneots L., Karesom, K and Viru, M. (1998) Age periods of accelerated improvements of muscle strength, power, speed and endurance in age interval 6-18 years. In Biology of Sport, Warsaw, V. 15 (4), 211–227



Rowing Canada Long Term Athlete Development





Physical, Mental and Cognitive, Emotional Development Characteristics

The following moving scale provides a guideline on how to utilise the Physical, Mental and Cognitive and Emotional Development Characteristics tables pointing out the overlaps at various stages of LTPD.

FUNdamentals	PreSTART	START	POTENTIAL	PERFORMANCE
FUNdamentals	Learning to Train	Training to Train	Training to Compete	Training to Win
Late Childhood		Late Puberty		
	Early Puberty		Early Adulthood	

Late Childhood - Physical Development			
Basic characteristics	General impact on performance	Implications for the coach	
Larger muscle groups are more developed than smaller ones.	The child is more skilful in movements requiring the use of the large muscle groups.	Emphasise the development of general motor skills involving the large muscle groups. Then gradually introduce more precise, coordinated movements requiring the interaction of smaller muscle groups.	
Heart size is increasing in relation to the rest of the body.	Endurance capacity is more than adequate to meet the demands of most activities.	Understand that the child has the capacity to keep going.	
Anaerobic system is not developed.	There is a limited ability to work anaerobically.	Plan short duration anaerobic activities. The ability to hold breath must be practiced and built up gradually.	
Motor patterns become more refined and the balance mechanism in the inner ear gradually matures.	Greater improvement in agility, balance, coordination and flexibility occurs towards the end of this phase.	Emphasise coordination and kinesthetic sense when doing activities. Balancing in the water using buoyancy aids is one way to develop these abilities.	
Children have a shorter tolerance time for exercise in extreme temperatures.	Children may show symptoms of overheating or hypothermia more quickly.	To acclimatise children will take longer so longer warm-ups may be required. Watch closely for signs of distress caused by extremes of temperatures.	
Children subjectively feel able to be active in the heat before physiological adaptation has occurred.		Postpone or restrict exercise in heat or humidity and ensure that plenty of fluids are ingested.	
Strength develops by improvement in the neural pathways.	There is apparent improvement in strength not brought about by the neuro-muscular adaptations of muscle fibres.	Plan coordination activities.	

Late Childhood - Mental and Cognitive Development			
Basic characteristics	General impact on performance	Implications for the coach	
The attention span gradually increases.	Children find it hard to listen or stay still for long periods.	Provide short and precise instructions. Children learn well by imitating and practicing correctly modelled movements.	
Children are enthusiastic and often impatient.	Children will want to move and not listen.	Do not bombard children with technical information. Give only sufficient detail for the activity to be undertaken. Keep the activity fun.	
Children have limited reasoning ability.	Children love to be led.	Direct the training and give it a tight focus with activities that are fun and well planned. Introduce imaginative ways of achieving performance goals.	
Children enjoy the repetition of activities and improve through experience.	Skill learning must be directed; children do not learn correctly just by trial and error.	Provide correct demonstrations of the basic sport skill. Personal demonstrations must be accurate.	
Children establish their preferred learning style.	Learning is through verbal, visual or manual means. Most children are doers!	Use a variety of learning styles to suit individual needs.	
Imagination is blossoming.	Creativity should be encouraged.	Allow the children to play and experiment. Use their ideas to create exciting sessions. Structure to encourage individuality and creativity. Sport provides an excellent vehicle for expression.	
Language skills may be limited but are improving.	Children can't make corrections to their performance unless they understand what is being asked of them.	Use terminology that can be easily understood. Gradually introduce technical terminology. Children love long words.	
Late Childhood -Emotional	Development		
Basic characteristics	General impact on performance	Implications for the coast	
Children like to be the centre of attention.	General impact on performance	Develop this characteristic. Plan activities that guarantee success.	

Basic characteristics	General impact on performance	Implications for the coach
Children like to be the centre of attention.		Develop this characteristic. Plan activities that guarantee success. Always move from simple to more complex when teaching a skill movement. Allow children to show their skills.
Children are developing their self-concept.	Children tend to evaluate their performance as a whole and in terms that may be black and white (I was brilliant, I was useless).	Provide positive reinforcement to build self-esteem. Children are likely to perform actions again if they are successful and feel good about it. Build on success.
Children feel secure with a structure and a routine to training.	Introduce change sensitively and gradually.	Build a structure that is progressive and maintains continuity.
Children feel secure when coaching is constant.	Children like things to be fair.	Set and maintain high levels of expectancy, but be consistent with each child. Do not let mood swings or personal situations change coaching behaviours.





Early Puberty - Physical Development				
Basic characteristics	General impact on performance	Implications for the coach		
Significant proportional changes occur in bone, muscle and fat tissue.	Players may temporarily lose some of their kinaesthetic awareness, their ability to 'know where they are'.	Because players will need to constantly change their positions, monitor carefully to ensure appropriate adaptations are being made.		
Girls begin their growth spurt between the ages of 10 - 14 years and grow at very different rates.	Players are very different sizes at the same age.	Be aware that age-related groupings may not be appropriate.		
Different parts of the body grow at different rates. Leg and arm length increases before the trunk.	Players may appear gangly and lose control of their extremities.	Make players aware of the effect of their changing body shapes. Skills already refined may need to be re-learned.		
There is a significant increase in red blood cells.	The oxygen transportation system is limited.	Introduce structured aerobic training to make the most of these changes. Only short duration of anaerobic training is recommended.		
The central nervous system is almost fully developed.	Agility, balance and coordination are fully trainable.	Use this period for maximum improvement in skill development.		
Decreases in flexibility result directly from growth.	Movement may become restricted.	Emphasise slow stretching exercises.		
Increases in growth and decreases in flexibility make adolescents prone to injury from acute impact.	Injury can result from exercise of an acute nature such as forced elongation of muscles during kicking and jumping on from overuse.	Vary land-based activities and activities to avoid overuse.		

Early Puberty - Mental and Cognitive Development			
Basic characteristics	General impact on performance	Implications for the coach	
Abstract thinking becomes firmly established.	Adolescents should be part of decision-making processes and be more responsible for their decisions.	Base decision making for strategies on skill level.	
A new form of egocentric thought develops.	The result may be a strong fear of failure.	Plan for success. Introduce coping strategies, including mental imagery.	
Young people are eager to perfect their skills.	Structure successful skill learning based on individual needs.	Provide positive reinforcement. Build on success. Be aware that athletes develop at very different rates and although early developers make early progress, include all players. Be aware that late developers may have greater potential.	

Early Puberty - Emotional Development			
Basic characteristics	Implications for the coach		
Physical, mental and emotional maturity may not develop at the same time.	Players who look mature may not act it. Confusion or anxiety may arise.	Develop communication skills and understanding.	
Tensions may arise between adults and adolescents.	Adolescents need help to cope with their physical and emotional changes.	Ensure two-way communication channels are open. Allow players input into the decision making.	
Hormonal activity increases.	Players may experience mood swings and behavioural change.	Communicate and accept changes but don't let hormonal changes be an excuse for negative behaviour.	
Social interaction between males and females becomes important.	Players want to form friendships and it is important to allow time for them to develop positive relationships.	Try to organise social events that allow social interaction.	

Late Puberty - Physical Development			
Basic characteristics	General impact on performance	Implications for the coach	
Post menarche height begins to stabilise. Increase in height is about 5%. Stabilisation of muscular systems also occurs.	Muscles have grown to mature size but increases in muscular strength continue into the twenties.	Develop communication skills and understanding.	
Skeletal maturation continues.	Connective tissue is strengthening.	Continue progressive overloading in training.	
By age 17, girls have generally reached adult proportions.	Girls proportionally gain more weight during this period.	Optimise aerobic training. Be aware how to deal with weight gains. Teach players how to compete in varied circumstances.	
Rate of improvement in motor ability declines.	Rate of development in skill development declines.	Be aware that the rate of improvement in motor ability will be slower, but improvement will still be made.	

Late Puberty – Mental and Cognitive Development			
Basic characteristics	General impact on performance	Implications for the coach	
Generally by 16, the brain has reached adult size, but continues to develop neurologically.	Players can understand the technical requirements of their sport.	Make sure players understand why they are doing certain things.	
Critical thinking becomes more established.	Players can make decisions about their training pathways.	Allow players input, reduce the amount of feedback and make players think for themselves. Develop awareness of performance by increasing kinaesthetic knowledge.	
There should be complete understanding and acceptance of the need for rules, regulations and structures.	Rules are seen in simplistic terms and must be clear and well defined.	Always be seen to be fair because adolescents have a strong sense of fairness in making decisions. Making players' part of the decision-making process.	





Late Puberty – Emotional Development				
Basic characteristics General impact on performance Implications for the coach				
Major decisions about examinations, further or higher education and employment have to be made.	There are 'pulls' on time and energy.	Build on prophylactic (preventative) breaks. Be aware if external pressures. Seek professional guidance to ensure the correct career pathway.		
Peer pressure groups lead to conflicting loyalties.	A player may give up sport because of peer pressure and the need to be seen as one of the gang.	Be sensitive in goal setting to ensure that common goals are established and met.		
Self actualisation and self expression are important.		Treat players as adults. Share goals and work cooperatively towards them. Maintain a coach-led structure.		
Interactions with friends of both sexes continue to be a priority.		Allow time to establish independent social interaction.		

Earl	y Adulthood	- Ph	vsical	Develo	pmen

Basic characteristics	General impact on performance	Implications for the coach
Physiologically the body reaches maturity during this phase.	All physiological systems are fully trainable.	Ensure that physical training programs employ the most advanced techniques and sport science information to facilitate maximum adaptation and minimise injuries.
		Ensure that all muscle groups and body alignments are well balanced, complemented with optimum flexibility ranges.
		State of the art testing and monitoring programs to be used.
		Carefully monitor overtraining and overstress.
Final skeletal maturation in females occurs at about 19-20 years and in males about three years later.		Organise regular medical monitoring.

Early Adulthood – Mental and Cognitive Development				
Basic characteristics	Basic characteristics General impact on performance Implications for the co			
Neurologically the brain matures about 19-20 years of age.	Players are capable of self- analysing and correcting and refining skills. Players can analyse and conceptualise all facets of their sport.	Establish winning as the major objective.		
	Well developed information processing skills improve the players' ability to visualise verbal instructions.	Implement principles of adult learning.		
There is a complete understanding and acceptance of the need for rules, regulations and structure.	The young adult must perceive the rules and structure as being clearly defined and fair.	Involve players in decision making and planning team or group activities.		

Early Adulthood – Emotional Development			
Basic characteristics	General impact on performance	Implications for the coach	
There is a need to be self-directed and independent.	Players are ready to assume responsibility and accept the consequences of their actions.	Emphasise goal setting to give definite direction and purpose to the player's overall programme.	
Self-actualisation and self- expression are important.		Treat players as adults and with respect. Remember that the coach's direction and structure remain important.	
Major decisions on career, education and lifestyle are priority at some point in this stage.	Major changes in interests, hobbies and physical activities occur.	Make professional guidance available, considering off-season and educational pursuits.	
Interactions with others continue to be a strong priority with lasting relationships developing.		Provide players with ample opportunities for independent social interaction.	





20	

APPENDIX

	FUNdamentals	Prestart Learning to Train	Start Training to Train
Stage of maturation	Late childhood	Late childhood/ Early puberty	Early puberty/ Late puberty
Chronological Age/ Developmental Level	Male 6-10 years Female 6-10 years BJA Licence 8 years	Male 9-12 years Female 8-11 years	Male LW 12-16 years Male MW 12-17 years Male HW 12-18 years Female 11-15 years
Progression	 This stage is important for learning the FUNdamental movement skill of: agility, balance, and co-ordination running, throwing, jumping and catching speed strength through own body weight learning to work with others other sports 	This stage is important for learning the FUNdamental sports skills of: • motor skills – more judo skills • endurance • flexibility • strength through own body weight • mental preparation (introduce) • at least 3 other sports	This stage is important for building fitness and learning judo skills, concen- trating on: • aerobic conditioning • speed • strength (towards end of stage) • flexibility • develop mental preparation • tactical preparation • at least 1–2 other sports
Volume/intensity of training	high volumelow intensity	 according to growth and likely to be high volume with increasing intensity 	according to growth and likely to be lower volume with increasing intensity
Number and length of sessions per week	 1-2 sessions of judo (45-60 mins) 4-6 sessions of physical activity 	 2-3 sessions of judo (45-75 mins) 3-4 sessions of general activity 	 5-7 sessions of judo (45-90 mins) 3-4 sessions of general activity or judo conditioning
Type/amount of competition	 Fun events Judo festivals 	 Club events Mini-Mon Area cadet National cadet 2-4 competitions per year 	 Club events Area cadet National cadet International cadet 4–8 competitions per year
Periodisation	None	Double	Double
VI Periodisation	None	None	Single
Number of gradings (per year)	 2–3 non-competitive junior gradings 	 2–3 non-competitive Junior gradings introduction to competitive gradings for more experienced players 	2–3 competitive junior/ senior gradings
Training venues	• School • Club	• School • Club	 School Club Regional training centre National training centre.
Coaches	Level 2 assisted by Level 1	Level 2 assisted by Level 1	• Level 2-3
Teaching considerations and strategies	 Prevent learners from skipping over this stage of fundamental skills formation. Present the learners with tasks conforming to the current phase of the learning program. 	 Prevent learners from skipping over this stage of fundamental performance skills formation in favour of high performance fads and versions of fundamental throws. Present the learners with tasks conforming to the current phase of the learning program. 	 For a learner to provide him with a qualified partner. It is also vital for the development of proactive and effective judo to provide a learner with a number of partners-with a variety of styles. If there are a lack of partners then exposing the player to various judo styles and skills (chasing the inconvenient and uncomfortable partners) for the purpose of further learning "their style" is advised.
Judo learning objectives	 Formation of sound fundamental judo skills, which are based around multi skill-experiences. 	 Introduction to basic performance skills, which require proficiency in basic technique and skills. 	 Formation of performance skills, which require a progressive introduc- tion to the more demanding and complex competitive situations.

Potential Training to Compete	Performance Training to Wi			
Late puberty/ Early adulthood	Early adulthood/ Adulthood			
Male LW 16-20 years Male MW 17-22 years Male HW 18-25 years Female LW 15-20 years Female MW 15-20 years Female HW 15-23 years	Male LW 20+ years Male MW 22+ years Male HW 25+ years Female LW 20+ years Female MW 20+ years Female HW 23+ years			
This stage is important for refining the fitness and judo skills of: • speed • strength • power • plyometric training • endurance • advanced judo skills • high level tactical concepts • quality decision-making • mental preparation (optimise)	This stage is important for maximising competitive performance through: • individual-specific judo training • technical and tactical preparation • specific speed training • individual strength work • endurance training • advanced mental-skills development			
high volumeIncreasing intensity	high volumehigh intensity			
 5–9 sessions of judo (60–90 mins) 5–6 sessions of judo conditioning 	 5–12 sessions of judo (60–120 mins) 4–6 sessions of judo conditioning 			
 National junior/senior International junior/senior 8–12 competitions per year 	 National junior/senior International junior/senior Peaking for major championships and selection events 			
Double	Double or multiple			
Double	Double or multiple			
• 2–4 competitive senior gradings.	• 2–4 competitive senior gradings.			
Club High-performance regional training centre National training centre	Club High-performance Regional training centre National training centre			
• Level 2–4	Level 2-5 coaches			
 For a learner to provide him with a qualified partner. It is also vital for the development of proactive and effective judo to provide a learner with a number of partners-with a variety of styles. If there are a lack of partners then exposing the player to various judo styles and skills (chasing the inconvenient and uncomfortable partners) for the purpose of further learning "their style" is advised. 	 Competition is the principal training means and method for high performar player aimed to achieve their maximum The key to successful development of high performance players is a structure competition program, which should include a full range of competitions to allow for the development of winning tactics and strategies against estimated opposition. It may also include a numb of low level competitions where differe goals would be met. 			
 Formation of individual set of tkuiwaza techniques. 	 Perfection of individual set of tkuiwaza techniques. Studying of opposition and developme of personal performance strategies and tactics. 			

in	Retainment Retire & Retrain					
	Adulthood					
	Own choice					
	Important for remaining involved in judo and physical activity.					
	volume and intensity to suit individual					
	 mixture of judo/physical activity to suit personal needs 					
	 National Masters International Masters 					
	• own choice					
	ClubRegional MastersNational Masters					
	Those with relevant experience & education					
nce n. ed						
d ber ent						
ent d						



ADDEN

	FUNdamentals	Prestart Learning to Train	Start Training to Train	Potential Training to Compete	Performance Training to Wi
Basic Skills	 Introduction to wide range of throwing and holding skills with emphasis on multi-directional movement. Introduction and development of falling skills (ukemi). Introduction to basic groundwork using simple moves into holds, escapes and combinations. Basic transference from throwing using simple movement patterns. Introduction the importance of correct stance (shizentai). Introduction to fundamental grip (hikite-tsurite). Introduction to unbalancing skills. Introduction to unbalancing skills. Introduction to movements with a partner (steps in sync, cooperation with uke, linear, diagonal movements in shizentai). Basic interaction with a partner (uke pushes, uke pulls). Introduction to 3 steps / 2 steps entries into a throw from 2 feet. Learning of 6 throws (ashiwaza, koshiwaza, tewaza). 	 Continued development of a wide range of multi-directional throwing (off one and two feet) and holding skills. Introduction to uchikomi drills. Early specialisation of personal techniques including development of some techniques on the weaker side. Introduction to transition from tachiwaza to newaza. Introduction to combination and counter techniques. Introduction to gripping skills. Reinforcement of shizentai, ukemi and hikite-tsurite. Proactive interaction with a partner (tori pushes/pulls uke) in a range of directions. Introduction to 3 steps / 2 steps entries into a throw from 1 foot. Learning of 12 throws (ashiwaza, koshiwaza, tewaza). 	 Continued and further development of a broad range of judo skills. Introduction of armlocks and strangles. Continued development and further specialisation and development of own techniques. Development of transition from tachiwaza to newaza. Development of combination and counter techniques. Constant reinforcement of fundamental skills to move and unbalance uke (taisabaki). Reinforcement of shizentai, ukemi and hikite-tsurite Introduction to 2 steps / 1 step entries into a throw from 1 foot. Introduction of "sacrifice" entries (sutemiwaza). Learning of 18 throws. 	 Continued development of judo skills relevant to the competition climate, rule changes, emergence of new styles, defences, techniques etc. Development of specialisation of own techniques with emphasis on competition specific skills and tactics. Refinement of transition from tachiwaza to newaza. Refinement of multi-directional combination and counter techniques. Encouragement of originality and innovation. Constant reinforcement of fundamental skills to move, grip and unbalance uke (taisabaki). 	 Continued development and refinement of individual-specific techniques with emphasis on competition specific skills and tactics. Continued refinement of transition from tachiwaza to newaza. Further refinement of multi-directional combination and counter techniques. Continued encouragement of originalit and innovation. Constant reinforcement of fundamenta skills to move, grip and unbalance uke (taisabaki).
Performance Skills	 Learning to respond to uke's forces (i.e. utilising his push/pull). Introduction to various scenarios in newaza - 6 osaewaza attacks and escapes. Learning of free practice (randori) with a cooperative partner. 	 Early stage Introduction to the action-reaction principle. Introduction to continuous attack (renzokuwaza). Introduction to realistic competitive scenarios in newaza. Later stage Introduction to realistic competitive scenarios in tachiwaza. Application of action-reaction principle in performance. Introduction to continuous attack with change of direction. 	 Early stage Introduction to realistic competitive scenarios in tachiwaza. Application of action-reaction principle in performance. Introduction to continuous attack with change of direction. Later stage Further application of action-reaction principle in performance. Introduction to coping with and countering opposition style and gripping. Introduction and development of competition-specific techniques and tactics including use of the contest area. 	 Learning all the throwing opportunities for tkuiwaza. Development of coping with and countering opposition style and gripping. Further development of contest strategies. 	 Refinement of coping with and countering opposition style and grippin Continued development of contest strategies.
VI specific skills	 V.I. co-ordination and motor skills to be developed (with family and school support). 	 Continuing to build the base of motor skills and co-ordination. General movement literacy skills. 	 Introduction to kumikata for V.I. contest starts. Developing listening skills (for scoring info etc. during competition). 		
Learning means	Repetitive exercises with a cooperative partner.	 Repetitive exercises with cooperative partner. Free-practice (randori). 	Repetitive exercises with a partner. Club randori Competitive experience. Skills development.	Repetitive exercises with a partner. Club randori. Competitive experience. Skills development.	• Full range of training methods.
Learning methods	 Controlled learning environment with the teacher's support gradually withdrawn. Gradual increase in complexity and physical demands to learners. Joint learning of uke and tori via introduction to scenarios. Practice of these should be performed in the total cooperation with partner. 	 Gradual increase in complexity and physical demands to learners. Situational learning i.e. randori limited to certain throws, grips, etc. Competitive practice. 	 Situational learning i.e. randori limited to certain throws, grips, etc. with gradual increase in complexity Competitive practice. 	 Situational learning i.e. randori limited to certain throws, grips, etc. with gradual increase in complexity: Randori with a less skilled uke with technical task for tri i.e. to apply agreed throws. Randori with uke of similar skills with technical tasks for tori i.e. to apply agreed throws. Full scenario competitive experience with gradual increase in the strength of opposition. 	• Full range of training methods.

DDENDI

ing to Win and refinement niques with specific skills ransition from t of originality f fundamental balance uke

n and e and gripping.



APPENDIX



36



Player Pathway

The player pathway, which is aligned to the coach pathway, is in place to ensure that judokas are given the very best opportunities and support to reach their full potential. A player should progress along the pathway moving seamlessly from one level to the next. In terms of participation this should lead to a person's lifelong involvement in the sport and for performance it should culminate in representation at the highest level (Commonwealth Games, European championships, World championships, Paralympic Games or Olympic Games).

37