1st4sport Level 3 in Coaching Judo

Module 7: Talent Identification and Talent Development

Module 7: Talent ID and Development

Module Outcomes

- Understand the principles and benefits of Long Term Athlete Development
- Recognise when maturation occurs and the psychical/developmental differences between genders
- Acknowledge that training development should be based on biological age, rather than chronologic
- Appreciate that elite performance can be achieved via both early and late specialisation
- Be conscious of the disadvantages of early specialisation and advantages of sampling of multiple sports during childhood
- Recognise the importance of muscle-based strength and movement competency
- Be aware that talent and psycho-social components develop alongside physical components across maturation stages
- Integration of a LTD model with the needs of the individual judo athlete and club

Module 7: Talent ID and Development

Talent Identification

- Encouraging children to participate in sports they are most likely to succeed in, based on results of testing selected parameters
- Recognising current participants with the potential to become elite players
- More likely to be successful in sports when the standard and depth of competition are low
- Successful Talent ID programmes in the UK include:
  - Rowing
  - Cycling
  - Bob skeleton
  - Sailing

Module 7: Talent ID and Development

The Relative Age Effect

- The Relative Age Effect (RAE) describes the bias where children born in, or close to, a critical age cut-off period may have an athletic (and academic) advantage
- 'Older' children are typically more physically, emotionally or cognitively developed
  - Greater early sport experience, increased selections and exposure
  - Overreliance on physical advantage can lead to reduced technical/tactical development
- 'Younger' children are often overlooked and miss out on opportunities
  - Lower sport fulfilment and higher drop out rates
- RAE is less prevalent in spots that group by height or weight
  - Typically adopted in boxing, judo etc.
- Sports are trialling bio-banding rather than age-grouping
  - Often based on Peak Height Velocity - Football, rugby

Module 7: Talent ID and Development

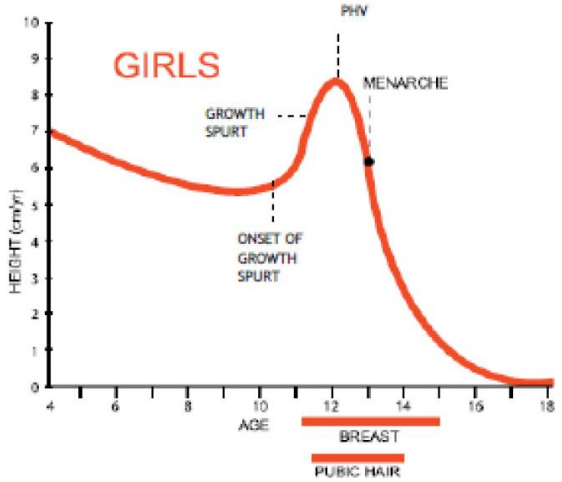
Reasons for Long Term Development

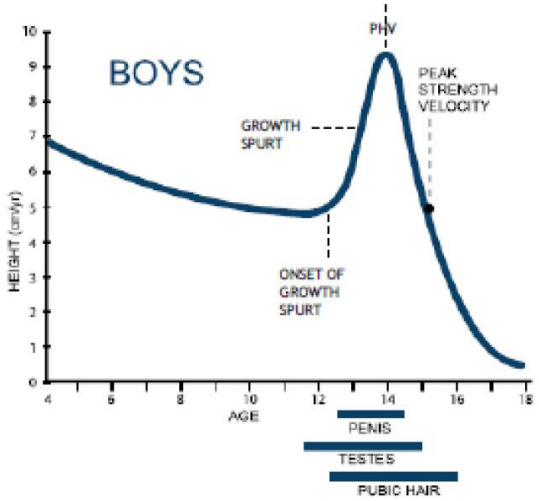
- Early success will not automatically lead to adulthood success
  - Growth, maturation and development are all components that affect an athlete's potential
- Selections should be also based on improvements and behaviours of the athlete within a development program
  - Allowing for the 'dynamic nature of talent'
- Talent ID based on age-group excellence regularly eliminates many late-maturing (potentially talented) athletes
- Athletes that have achieved childhood success are frequently deselected once their early physical advantages are removed
  - Resulting in demotivation and premature withdrawal from sport

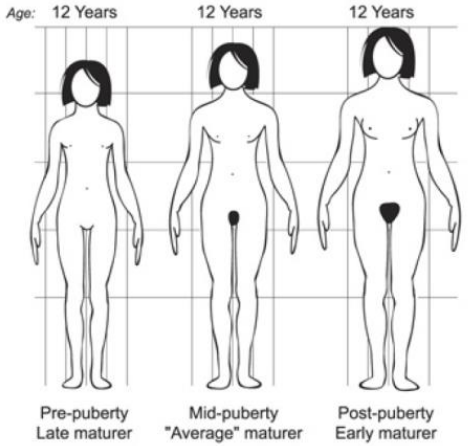
Module 7: Talent ID and Development

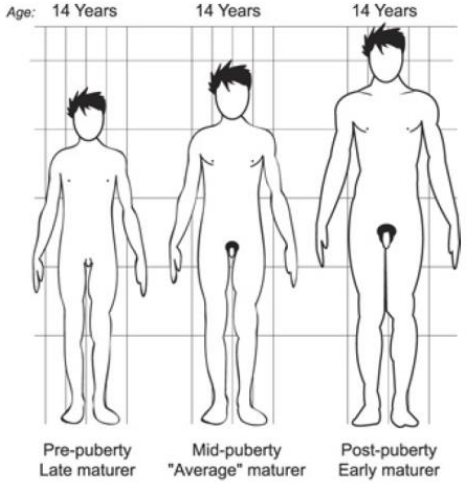
Physiological Considerations and Gender Differences

- Peak Height Velocity (PHV) in females occurs around 12yrs (with menarche following approximately one-year after). In males PHV occurs around 14yrs.
  - Peak Strength Velocity (PSV) happens around one year later
- Maturation can occur two or more years before or after these average ages
  - Early-maturers may have up to a four-year physiological advantage over late-maturers









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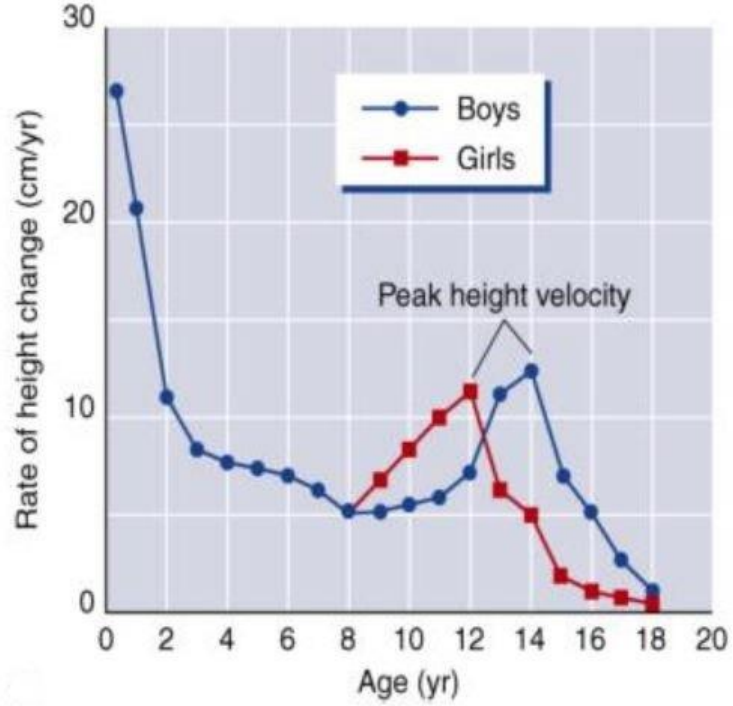
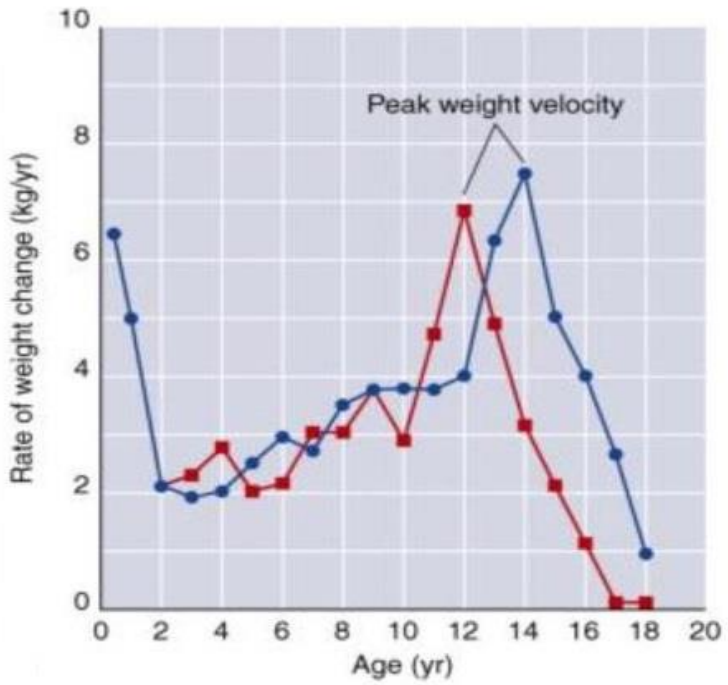
Module 7: Talent ID and Development

Peak Height Velocity and Peak Weight Velocity

- Peak Height Velocity and Peak Weight Velocity occur at the same time
  - Movement proficiency is affected as co-ordination fluctuates





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Module 7: Talent ID and Development

Sports Sampling and Specialisation

- Sport-sampling is trying a variety of sports and physical activities
  - More rounded motor and social skills, more fully developed physical body
  - Lifelong physical activity with lower injury risk
- Sports specialisation is intense, year-round training in a single sport at the exclusion of other sports
  - Increased chance of elite performance
  - Higher rate of burnout and injuries
- Training age is the number of years the athlete has participated in formalised training
  - Late starters should begin with FMS development and strength training
  - Early starting and early-maturing athletes could be exposed to more progressed training

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Deliberate Practice

- Naïve practice, a basic level of competency then performance plateaus
- Purposeful practice, a more focused and deliberate approach
  - Well-defined, specific goals – our purpose
  - Focus – high concentration and no distractions
  - Feedback – the more immediate the better
  - Pushing beyond our comfort zones – adapt and create that new normal
- Deliberate practice, both purposeful and *informed*
  - Purposeful practice + objective standards for success + expert coaching = deliberate practice

(Ericsson, Krampe, & Tesch-Römer 1993)

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Deliberate Play

- Deliberate play, creating a pick-up sports game and playing
  - Develops decision-making
  - Intrinsically motivating and enjoyable
- Sport is (mostly) improvisational, technique mastery is important but athletes must also be able to recognise opportunity
  - Opportunity recognition can't flourish in unopposed drills
  - Develops better in (opposed) match play, or in practice conditions that retain the most representative features of match play
- For long-term development in sport, deliberate play is essential

(Baker, Côté, & Abernethy, 2003)

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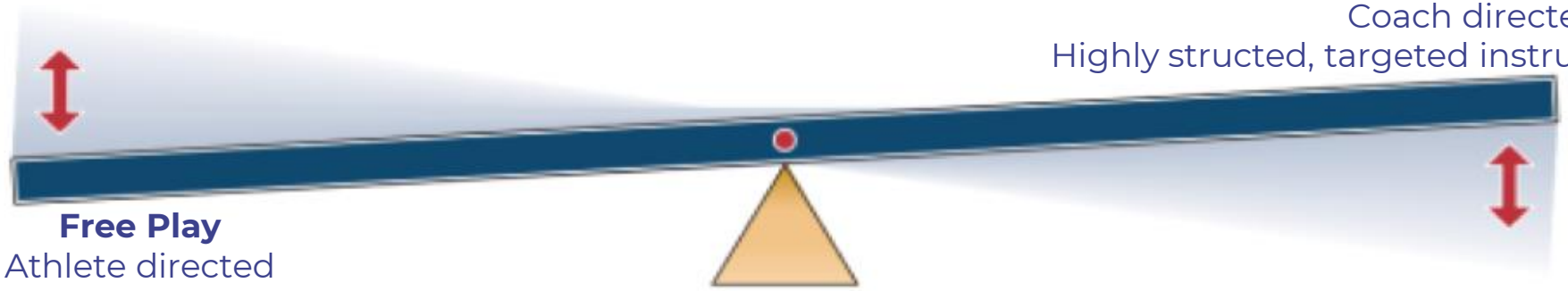
Play vs Practice

	Free Play	Deliberate Play	Structed Practice	Deliberate Practice
Goal	Fun	Fun	Improve Performance	Improve Performance
Perspective	Process (means)	Process experimentation	Outcome (ends)	Outcome (ends)
Monitored	Not Monitored	Loosely monitored	Monitored	Carefully monitored
Correction	No correction	No focus on immediate correction	No focus on correction, often by discovery	Focus on immediate correction
Gratification	Immediate	Immediate	Immediate and delayed	Delayed
Enjoyment	Intrinsic	Predominately intrinsic	Intrinsic and extrinsic	Extrinsic

Deliberate Practice
Coach directed
Highly structed, targeted instruction and feedback



Free Play
Athlete directed
Unpredictable, creative and self regulated

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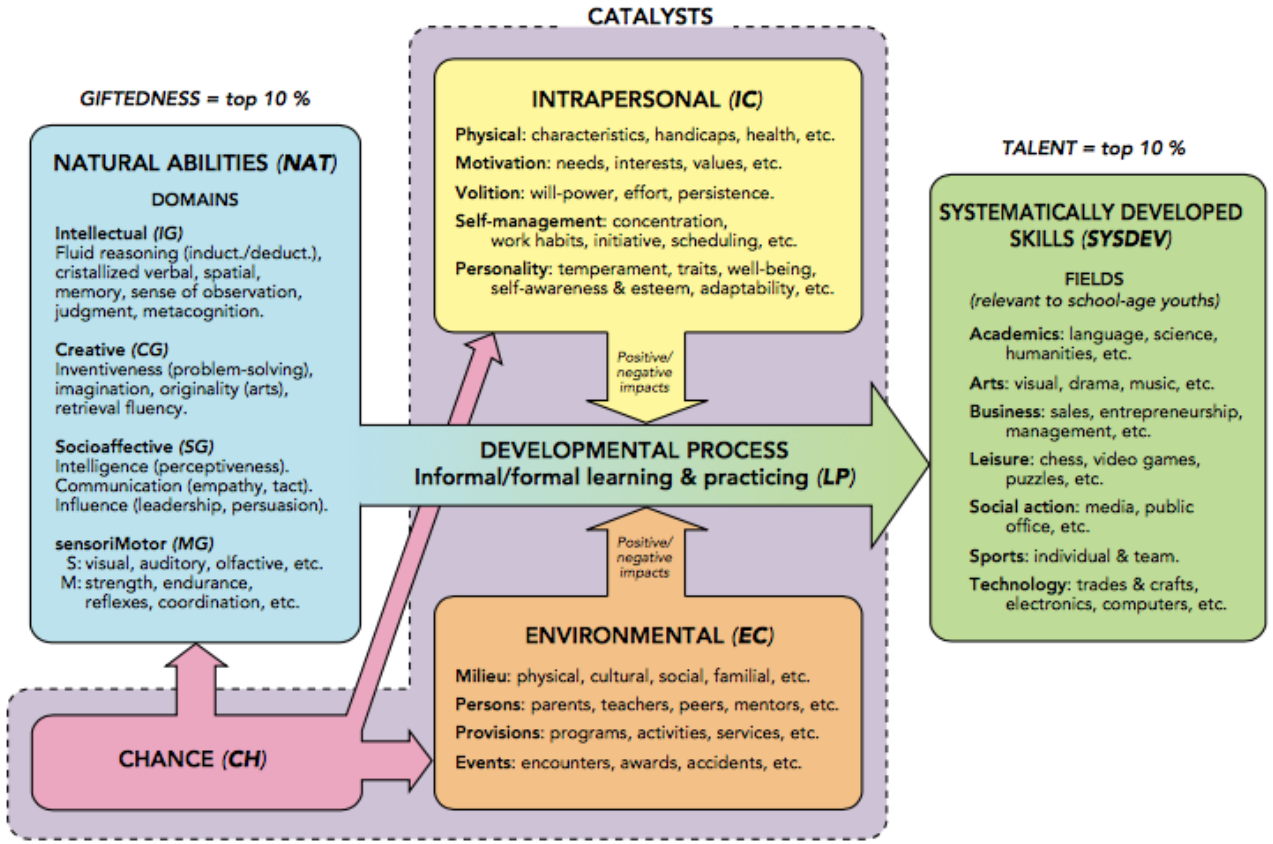
Module 7: Talent ID and Development

Differentiated Model of Giftedness and Talent

- Research-based definitions of giftedness and talent
- Directly and logically connected to teaching and learning
- Represents how different effects impact on the outcome of a students giftedness and talent



Differentiated Model of Giftedness and Talent (DMGT: Gagne, 1995)

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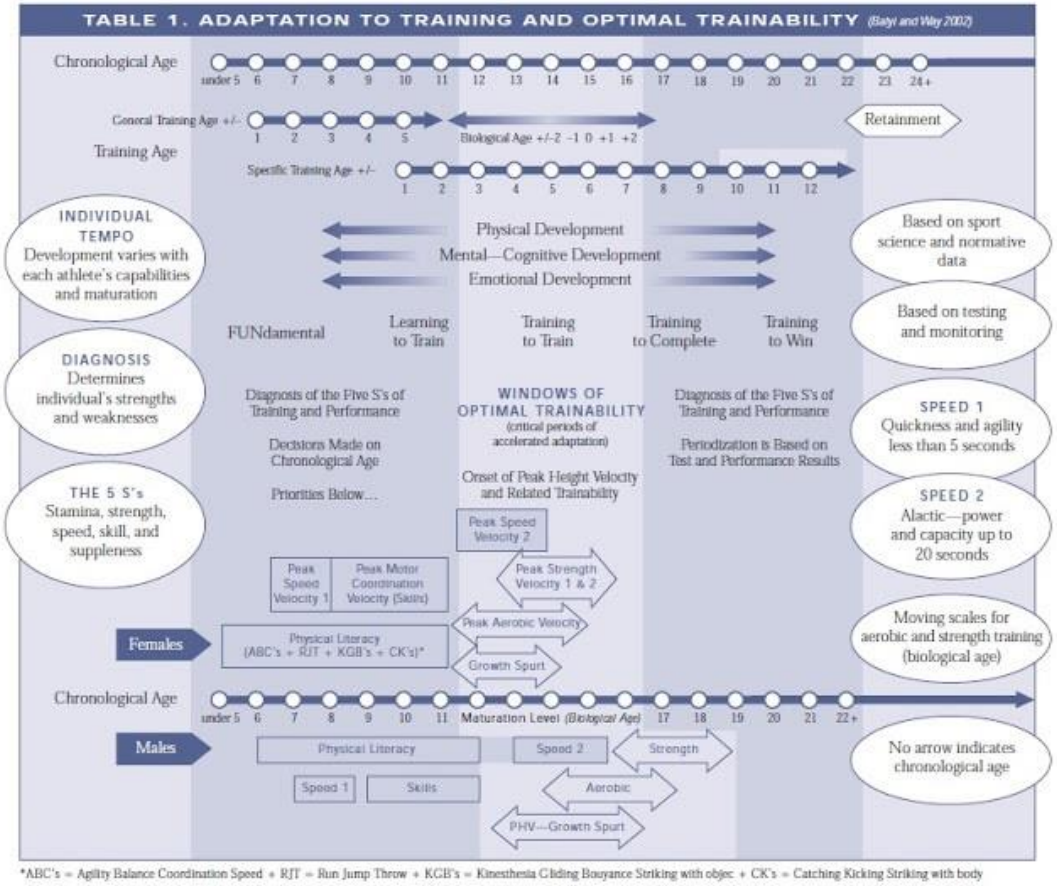
Module 7: Talent ID and Development

Long-Term Athlete Development Model

- Based on the “10,000-hour rule”
- Provides a framework for the optimal development of physical skills by taking advantage of ‘windows of optimal trainability’
- Presents training development based on biological age, rather than chronologic
- Acknowledges the psychical/developmental differences between genders
- Guidance on training activities is limited, also lacks evidence and validity



Long-Term Athlete Development Model(LTAD; Balyi & Hamilton, 2004)

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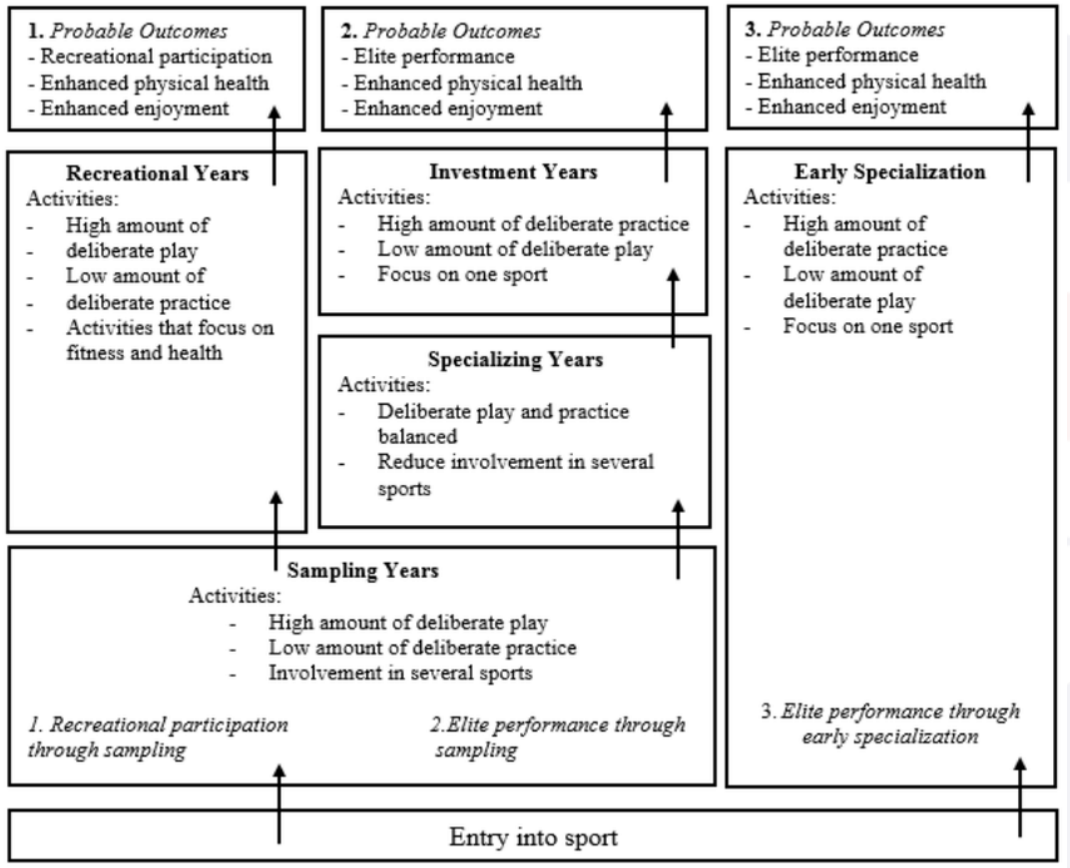
Developmental Model of Sport Participation

- Based on theories of both child and sport development
- Proposes various sporting outcomes by concentrating on fundamental processes and the environments in which these take place
- Encourages the sampling of multiple sports during childhood and supports that elite performance can be achieved via both early and late specialisation
- Provides no guidance on training activities and is based on interviews of elite athletes



Developmental Model of Sport Participation
(DMSP; Côté, Baker & Abernethy, 2007)

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Module 7: Talent ID and Development

Youth Physical Development Model

- Evidence-based method for the development of young athletes' physical performance
  - Provides a structure for the development physical qualities and rational for their emphasis during different age periods
  - Recognises that these qualities are trainable during all stages of development
- Provides rationale for training activities based on research
  - Highlights the importance of muscle-based strength and movement competency, reduces risk of injury
- Solely focuses on physical development, with no psycho-social parameters

YOUTH PHYSICAL DEVELOPMENT (YPD) MODEL FOR FEMALES																			
CHRONOLOGICAL AGE (YEARS)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21+
AGE PERIODS	EARLY CHILDHOOD			MIDDLE CHILDHOOD					ADOLESCENCE										ADULTHOOD	
GROWTH RATE	RAPID GROWTH ↔			STEADY GROWTH ↔					ADOLESCENT SPURT ↔										DECLINE IN GROWTH RATE	
MATURATIONAL STATUS	YEARS PRE-PHV ←								PHV →										YEARS POST-PHV	
TRAINING ADAPTATION	PREDOMINANTLY NEURAL (AGE-RELATED)								↔ COMBINATION OF NEURAL AND HORMONAL (MATURITY-RELATED)											
PHYSICAL QUALITIES	FMS			FMS				FMS	FMS											
	SSS			SSS				SSS	SSS											
	Mobility			Mobility					Mobility											
	Agility			Agility					Agility						Agility					
	Speed			Speed					Speed						Speed					
	Power			Power					Power						Power					
	Strength			Strength					Strength						Strength					
	Hypertrophy								Hypertrophy	Hypertrophy									Hypertrophy	
	Endurance & MC			Endurance & MC					Endurance & MC										Endurance & MC	
TRAINING STRUCTURE	UNSTRUCTURED			LOW STRUCTURE					MODERATE STRUCTURE					HIGH STRUCTURE					VERY HIGH STRUCTURE	

Youth Physical Development Model (YPDM; Lloyd & Oliver, 2012)
Sports Coach UK YPDM Animation

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Module 7: Talent ID and Development

Youth Physical Development Model

YOUTH PHYSICAL DEVELOPMENT (YPD) MODEL FOR FEMALES																			
CHRONOLOGICAL AGE (YEARS)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21+
AGE PERIODS	EARLY CHILDHOOD			MIDDLE CHILDHOOD					ADOLESCENCE											ADULTHOOD
GROWTH RATE	RAPID GROWTH ↔ STEADY GROWTH ↔ ADOLESCENT SPURT ↔ DECLINE IN GROWTH RATE																			
MATURATIONAL STATUS	YEARS PRE-PHV ← PHV → YEARS POST-PHV																			
TRAINING ADAPTATION	PREDOMINANTLY NEURAL (AGE-RELATED) ↔ COMBINATION OF NEURAL AND HORMONAL (MATURITY-RELATED)																			
PHYSICAL QUALITIES	FMS			FMS			FMS		FMS											
	SSS			SSS			SSS		SSS											
	Mobility			Mobility					Mobility											
	Agility			Agility					Agility						Agility					
	Speed			Speed					Speed						Speed					
	Power			Power					Power						Power					
	Strength			Strength					Strength						Strength					
	Hypertrophy								Hypertrophy						Hypertrophy					
	Endurance & MC			Endurance & MC					Endurance & MC						Endurance & MC					
TRAINING STRUCTURE	UNSTRUCTURED			LOW STRUCTURE					MODERATE STRUCTURE					HIGH STRUCTURE					VERY HIGH STRUCTURE	

YOUTH PHYSICAL DEVELOPMENT (YPD) MODEL FOR MALES																				
CHRONOLOGICAL AGE (YEARS)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21+
AGE PERIODS	EARLY CHILDHOOD			MIDDLE CHILDHOOD							ADOLESCENCE									ADULTHOOD
GROWTH RATE	RAPID GROWTH ↔ STEADY GROWTH ↔ ADOLESCENT SPURT ↔ DECLINE IN GROWTH RATE																			
MATURATIONAL STATUS	YEARS PRE-PHV ← PHV → YEARS POST-PHV																			
TRAINING ADAPTATION	PREDOMINANTLY NEURAL (AGE-RELATED) ↔ COMBINATION OF NEURAL AND HORMONAL (MATURITY-RELATED)																			
PHYSICAL QUALITIES	FMS			FMS			FMS				FMS									
	SSS			SSS			SSS				SSS									
	Mobility			Mobility							Mobility									
	Agility			Agility							Agility				Agility					
	Speed			Speed							Speed				Speed					
	Power			Power							Power				Power					
	Strength			Strength							Strength				Strength					
	Hypertrophy										Hypertrophy				Hypertrophy					
	Endurance & MC			Endurance & MC							Endurance & MC				Endurance & MC					
TRAINING STRUCTURE	UNSTRUCTURED			LOW STRUCTURE							MODERATE STRUCTURE				HIGH STRUCTURE					VERY HIGH STRUCTURE

Youth Physical Development Model (YPDM; Lloyd & Oliver, 2012)

Sports Coach UK YPDM Animation

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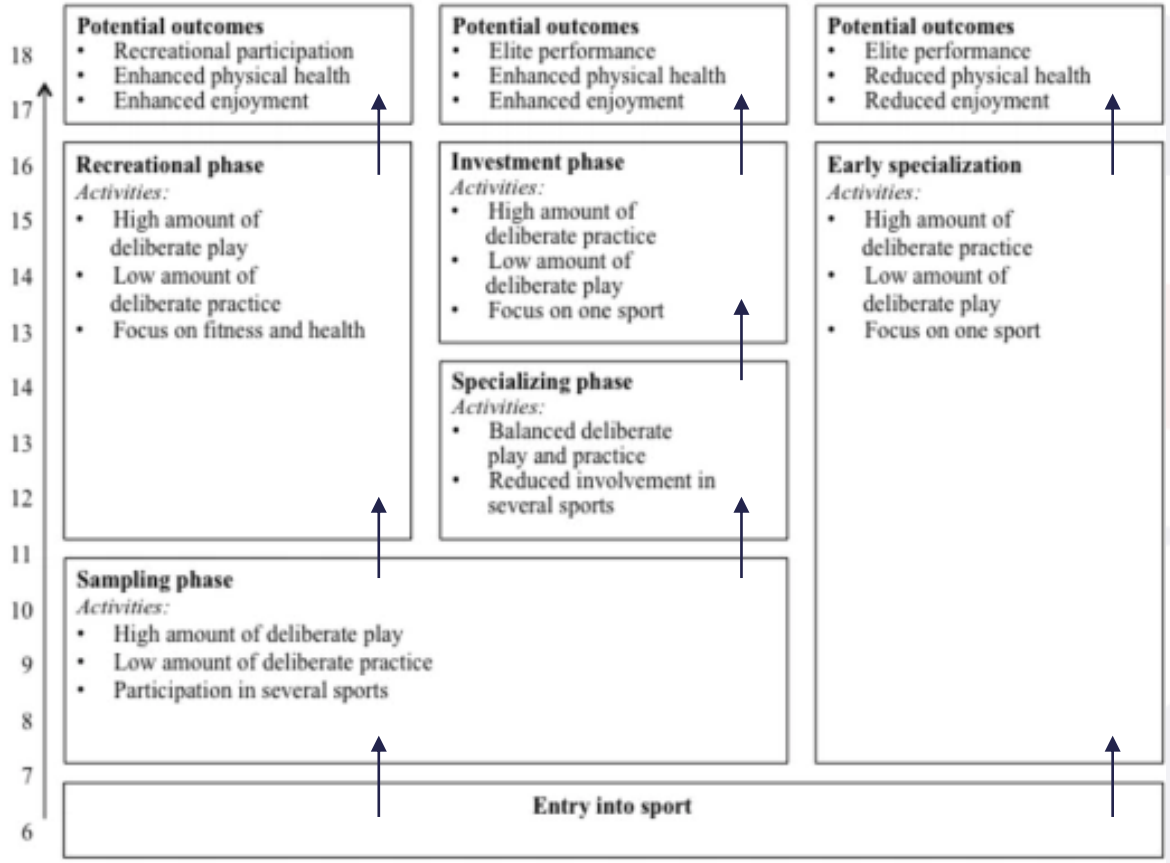
Module 7: Talent ID and Development

Adapted Developmental Model of Sport Participation

- Adapted from the DMSP to highlight:
  - Early specialisation often has the outcomes of reduced physical activity and enjoyment in adulthood
  - Later specialisation tends to have the outcomes of enhanced physical activity and enjoyment in adulthood

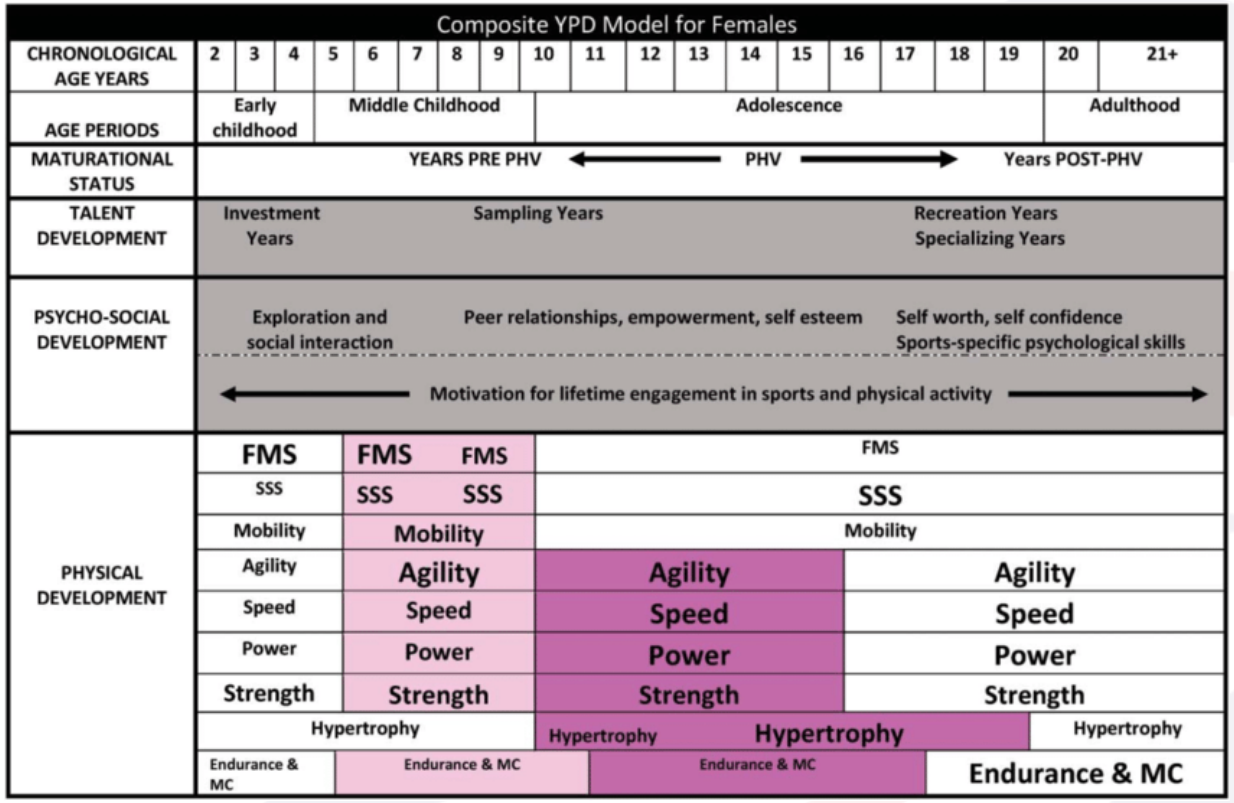


Adapted DMSP (CYD; Lloyd et al., 2015)

Module 7: Talent ID and Development

Composite Youth Development Model

- Combines the YPD model with an adapted DMSP model:
  - Integrates talent, psycho-social and physical development across maturation stages
- A strategic youth development plan:
  - Maximising sporting talent
  - Developing long-term physical fitness, health and well-being
  - Increasing physical activity participation rates
  - Reducing the possibility of sport injuries



Composite Youth Development Model (CYD; Lloyd et al., 2015)

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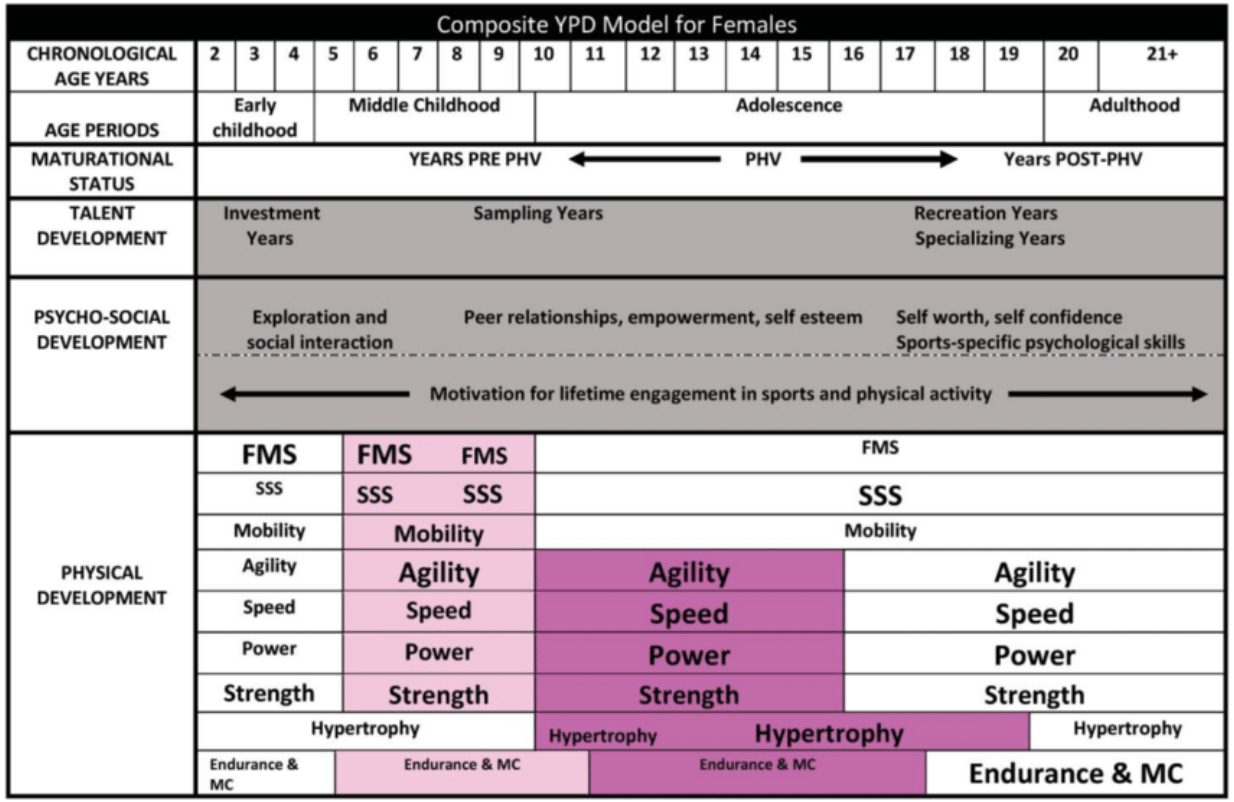
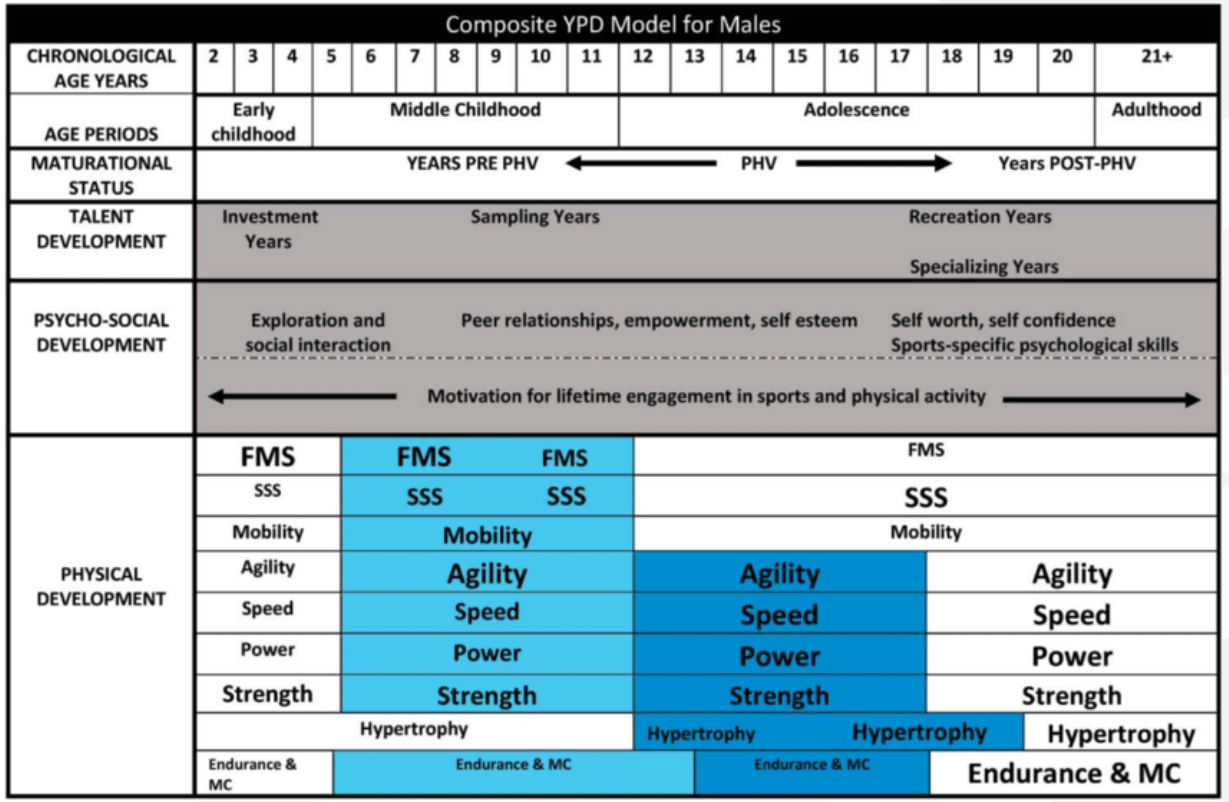
Module 7: Talent ID and Development

Composite Youth Development Model





Composite Youth Development Model (CYD; Lloyd et al., 2015)

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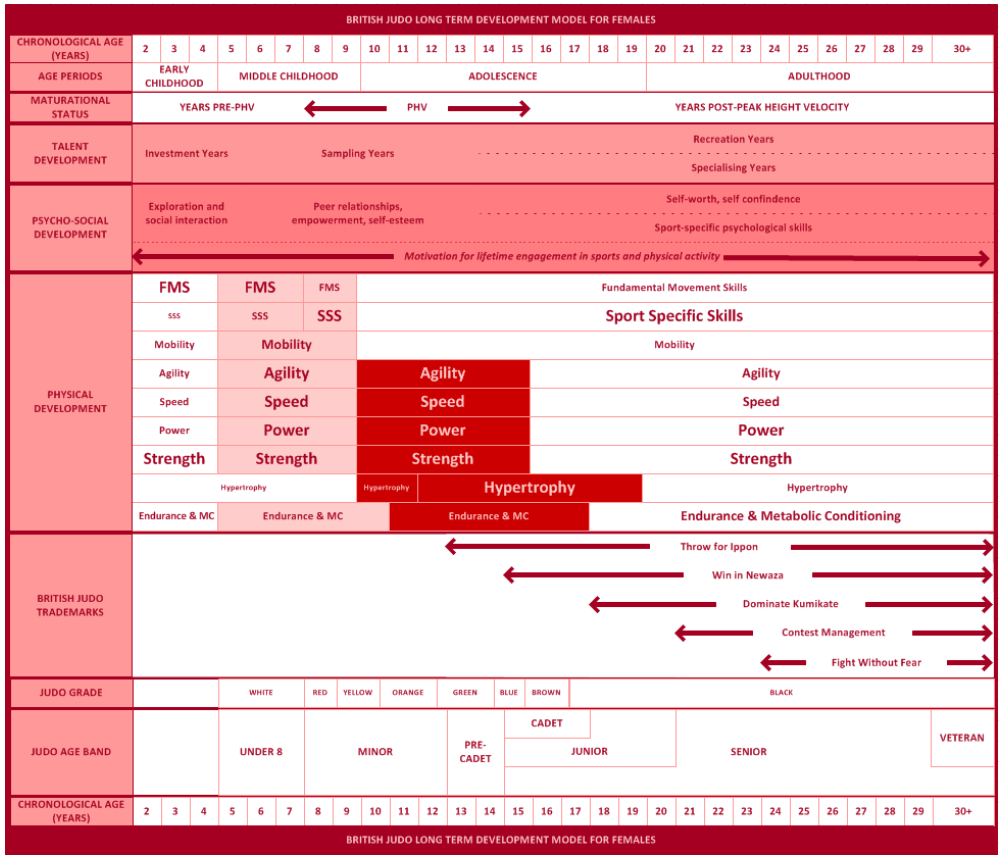
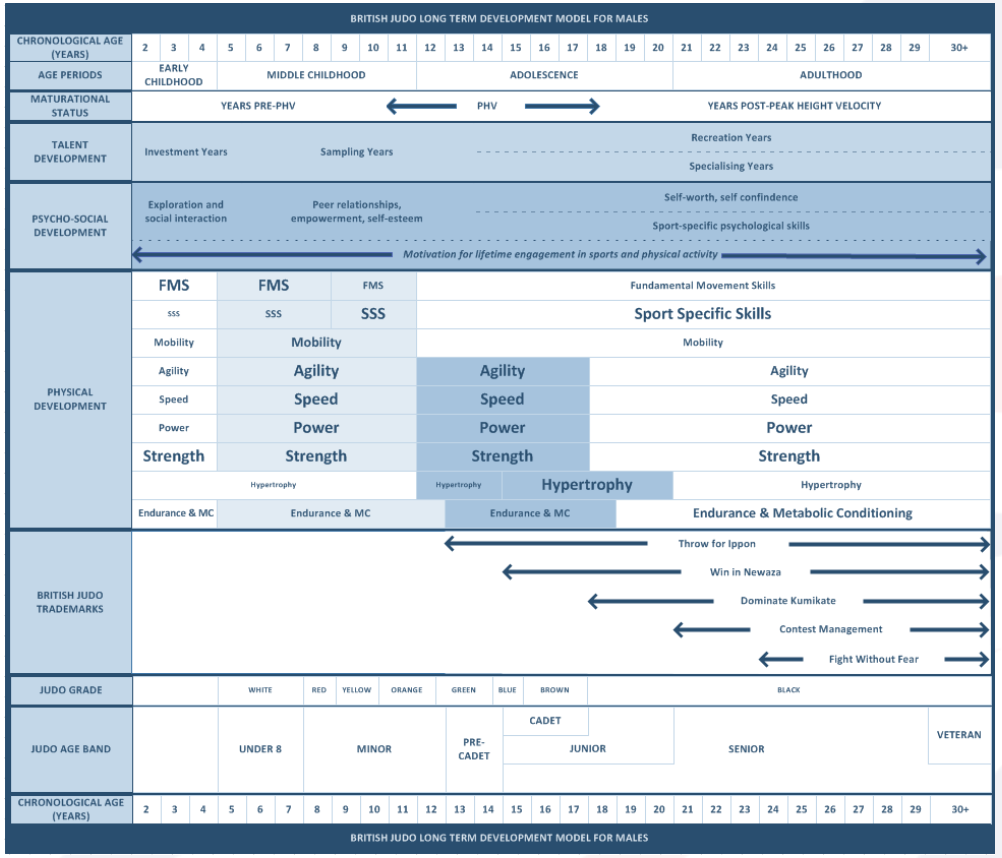
Module 7: Talent ID and Development

Long Term Development Model for British Judo





Adapted CYD integrating British Judo age bands, grades and trademarks (Nunn, 2019)

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Module 7: Talent ID and Development

British Judo Long Term Development Model Benefits

- Adapted from evidenced based researched long-term development athlete models
- Shows when maturation occurs and highlights the psychical/developmental differences between genders
- Training development is based on biological age, rather than chronologic
- Provides a structure for the development of physical qualities during different age periods
- Recognises that physical components are trainable during all stages of development
- Highlights the importance of muscle-based strength and movement competency
- Integrates talent and psycho-social components develop alongside physical components across maturation stages
- Maximises sporting talent with the development of long-term physical fitness, health and well-being
- Allows coaches to consider the needs of both the recreational as well as the specialising athlete
- Combines British Judo age-groups, grades and trademarks; providing guidance to coaches on how to access the performance pathways