# Athlete Development Through Multiple Sport Participation



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# Should kids sample multiple sports early in their development? (YES or NO)











# Should kids specialize at an early age and concentrate only on one sport? (YES or NO)

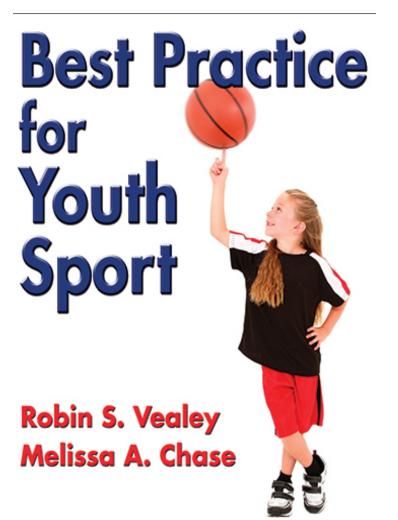


## IT DEPENDS!

- 1. No evidence that early exclusive specialization works for MOST kids in MOST sports.
- 2. Early, exclusive specialization works for SOME kids in SOME sports.
- 3. Children can diversify (sample) early and still attain elite status in most sports as an adult (assuming talent and practice).



# Emphasis on a Multidimensional Approach to Youth Sport Participation



1. Build range of *mature* fundamental motor skills to achieve physical literacy.

Help nurture their LOVE of the game (not "kill and drill").

3. Enable the adoption of a signature or favorite activity, not mandating exclusive specialization.

## And who is it all about.....?



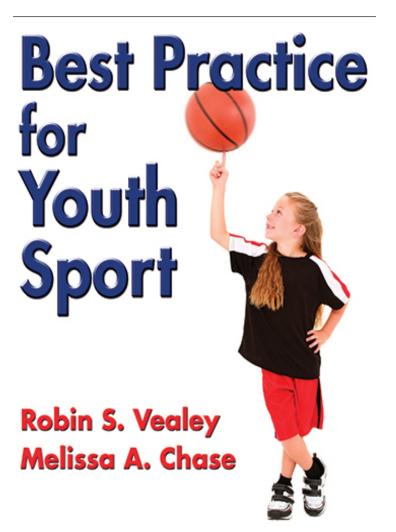




The Kids!!!

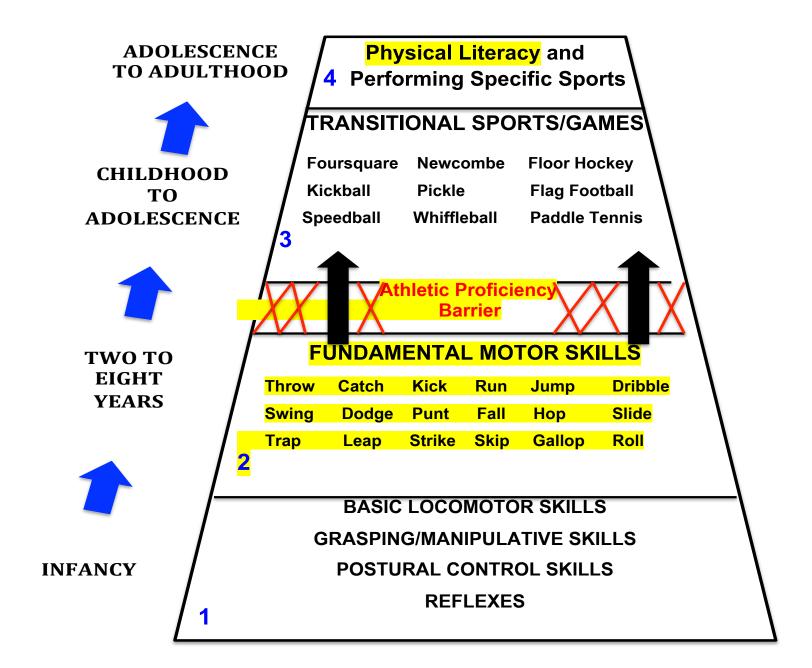


# Emphasis on a Multidimensional Approach to Youth Sport Participation



1. Build range of *mature* fundamental motor skills to achieve physical literacy.

### Mountain of Motor Skill Development (Clark & Metcalf, 2002, Vealey & Chase, 2016)



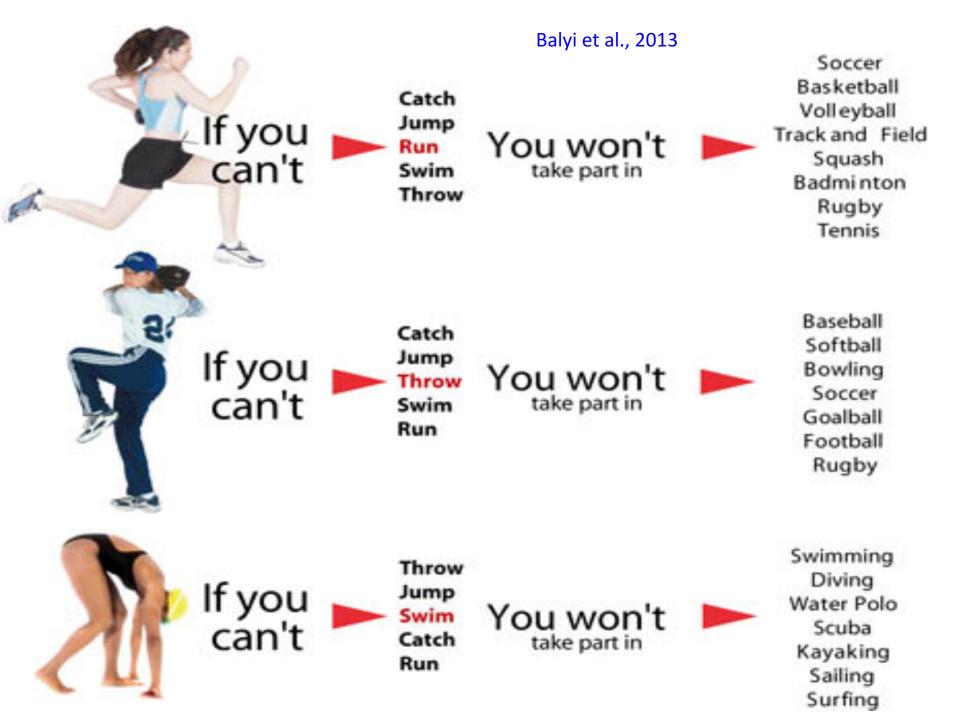
## **Fundamental Motor Skills**



1. Basic motor movements that are minute parts of all sport skills

2. Form foundation for all subsequent motor skills a child develops

3. Proficiency in many/all FMS provides more options for the child in learning and training for sport



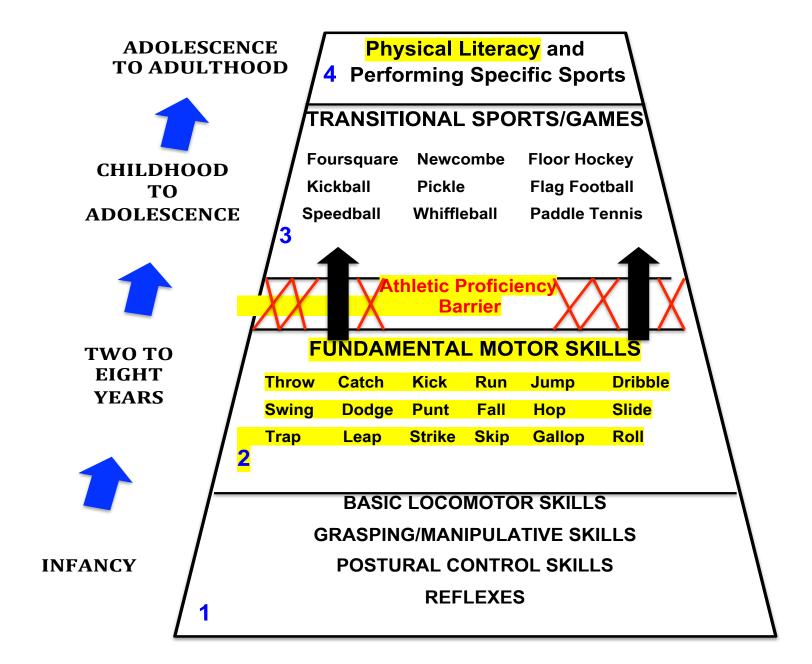
# Reaching the Mature Stage of Fundamental Motor Skills Development

#### **Movement is:**

Mechanically efficient, coordinated, and controlled (often automatic)



### Mountain of Motor Skill Development (Clark & Metcalf, 2002, Vealey & Chase, 2016)



#### How can we help kids through the athletic proficiency barrier?

- 1. Multiple and varied free play and deliberate play experiences
- Skill development first tactics and results secondary
- 3. Coaches take nothing for granted train for MATURE fundamental motor skill technique in each sport
  - Jump technique in adolescent girls
  - Running and rebounding in basketball
  - Overhand throwing





**Physical Literacy and** 

**4** Performing Specific Sports



#### TRANSITIONAL SPORTS/GAMES

CHILDHOOD TO ADOLESCENCE Foursquare Newcombe Floor Hockey
Kickball Pickle Flag Football

Speedball Whiffleball

**Paddle Tennis** 



### Athletic Proficiency Barrier

TWO TO EIGHT YEARS

#### **FUNDAMENTAL MOTOR SKILLS**

**Throw** Catch **Kick** Run Jump **Dribble Swing** Dodge Punt Fall Hop Slide Trap Strike Skip Gallop Leap Roll



2

BASIC LOCOMOTOR SKILLS

**GRASPING/MANIPULATIVE SKILLS** 

**POSTURAL CONTROL SKILLS** 

**REFLEXES** 

**INFANCY** 

# Physical Literacy: Ultimate Goal of Motor Skill Development



 Physical competence to engage in multiple physical activities throughout life

Provides range of motor options

 Allows for versatility and adaptability in playing multiple sports

# How physical literacy is enhanced via multiple sport participation

What football coach wouldn't want a kid with the ability to change direction that basketball teaches?

Or the hand-eye coordination that baseball teaches?

Or the same explosion learned from track?



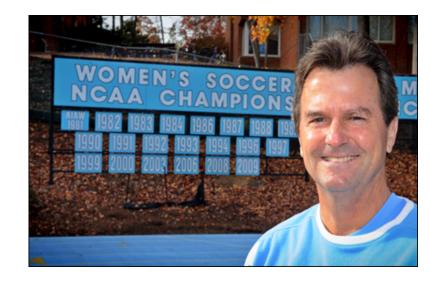
"[He] has had a solid career, but he hasn't achieved what some thought he might. I feel that part of the problem is that he only played golf growing up. That hurts him. In other ball games, you develop a feel for throwing and distance. He never did that. He doesn't have the instinctive touch or hand-eye coordination you need to hit the ball on close-in shots. If only he'd played baseball or basketball as a kid. That would have helped him."

Internationally reknowned golf instructor David Leadbetter, talking about a tour player whom he has coached since age 12. Huggan, 2013

### **College Coaches on Multiple Sport Participation**

"We don't want the kid who's pasteurized and geared for one thing. We want the kid that wants to beat you in everything, and plays everything."

Anson Dorrance, UNC women's soccer coach

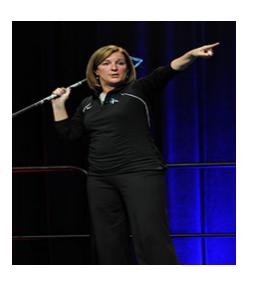


"We like 'em cross-trained. Stick with multiple sports as long as you possibly can, and people are going to see your tools. Stick with one sport long enough, and people are going to see your scars."

John Savage, UCLA baseball coach



#### **College Lacrosse Coaches on Multiple Sport Participation**



"We prefer multi-sport athletes for the diversity of skill sets that they have developed. One of the first questions we ask recruits is "Do you play basketball?" Then they understand angles, footwork, and how to get low on defense. We also love soccer players, because they can run all day." Janine Tucker, Johns Hopkins



We like the diversity these kids experience – different rules, skill sets, coaching styles. They're not doing the same thing all the time, but learning and understanding different strategies and muscle memory."

"There's pressure to specialize in lacrosse. I see it backfiring, as it's often the parents who want their kids to specialize. Don't succumb to the pressure that your kid 'has to do this' to get to the next level. That's not true. Scott Marr, Albany

# U.S. Soccer survey of more than 500 college coaches



Only 7% said they would prefer a player who played only soccer and was not a multisport athlete.

usasoccer.org

## **Abby Wambach**



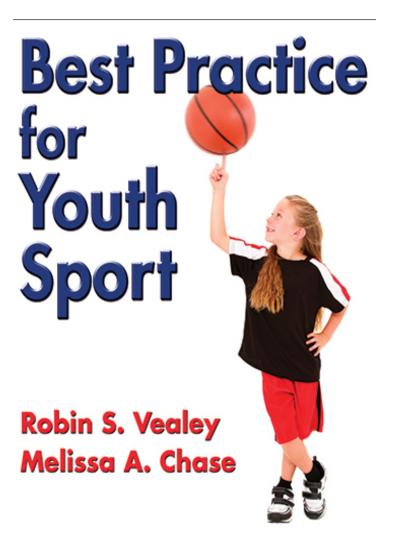


 Greatest header in women's soccer history

 "Playing basketball had a significant impact on the way I play soccer.. learning the timing of your jump, and the trajectory of the ball coming off the rim.

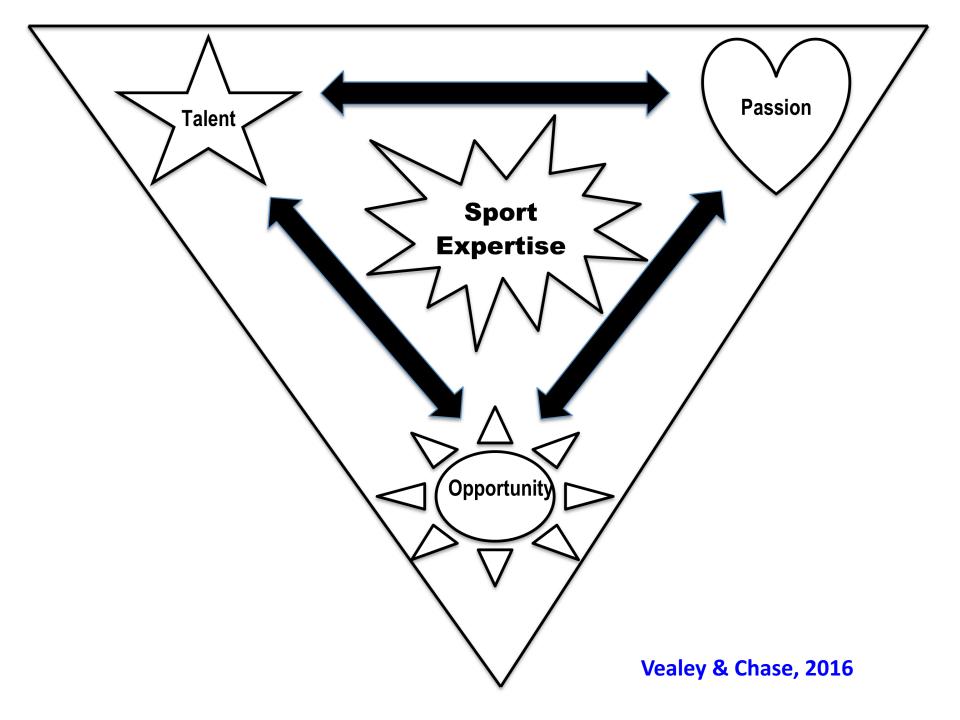
"It's the same game as soccer, in terms of vision." Rogers, 2015

# Emphasis on a Multidimensional Approach to Youth Sport Participation



 Build range of mature fundamental motor skills to achieve physical literacy.

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#### A "Rage to Master" (Winner, 1996)



"Maybe it wasn't the talent that the Lord gave me, maybe it was the passion."

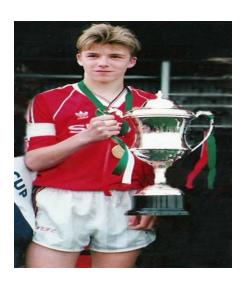
"No one ever had to tell me to practice."

**Wayne Gretzky** 



"I've not experienced the passion with which Katie trains and races. She's doing it with fury. Where Is the fury coming from? We don't know, but the stove is running hot.

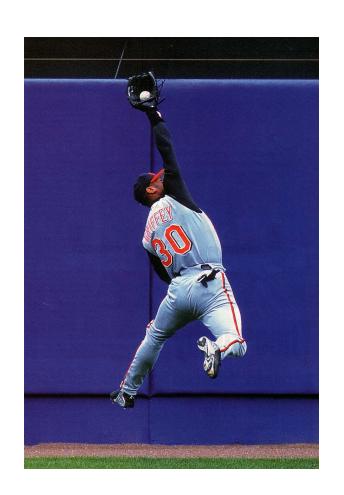
Katie Ledecky's coach



"He would kick the ball from the same spot for hours as a young child. His dedication was breathtaking. He lived on the local field."

David Beckham's father

# Benjamin Bloom's Stages of Talent Development (1985)



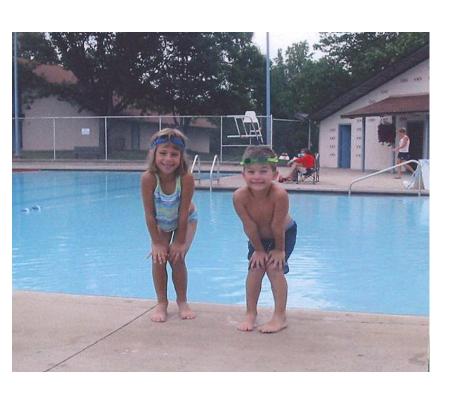
 Four-year longitudinal study on career evolution of 120 talented athletes, musicians, artists, and scientists

Interested in the process of how talent was developed

### **Conclusions from Bloom's (1985) Study on Talent Development in Experts**

Initiation (Romance) Stage	Development Stage	Perfection (Expert) Stage
Engaged in fun and playful activities	Became "hooked" on activity; identifies selves as [gymnasts], not kids doing [gymnastics]	Became experts; emphasis now on development of extremely high-level skills
Focus on process/effort, not outcomes	Significant increase in practice time and increased focus on achievement and technique	Were radically obsessed by their sport, which dominated their lives at this point
Parents responsible for stimulating and/or nurturing interest in the activity	Coaches more technically skilled, and took strong personal interest in children	Shift in responsibility for training/competition from coaches to athletes; athletes had to be autonomous and extremely knowledgeable
Coaches not technically advanced, but warmly supportive	Significant increase in practice time, and required sacrifices by athletes and parents	Parents played lesser role at this stage

## **Key Finding by Bloom** (1985)



Had there been no excitement and enjoyment during the early years (ROMANCE), there would never have been a middle or late period of participation in the sport

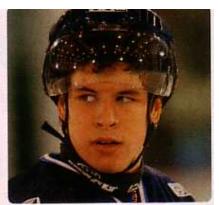
Hook and challenge!

NOT "drill and kill"

## **Importance of Deliberate Practice**







- 1. Expert performance = result of extended process of skill acquisition
- 2. Repetitive, deliberate practice for 10,000 hours (Ericsson et al., 1993)

## Deliberate practice is necessary, but not *sufficient* as motivational fuel for kids



1. 10,000 hours of deliberate practice is not a "rule"

#### 2. Deliberate play

- Informal sports or games that kids engage in for enjoyment but that contribute to skill development
- Many elite athletes spent more time in deliberate play as kids than in deliberate practice (prior to age 13)

#### Developmental stages of talent development in sport (Cote)

Stage (ages)	Sampling Years (6-12)	Specializing Years (13-15)	Investment Years (15+)
Objectives	Fun and excitement; trying new things	Skill development but enjoyment and excitement still important	Skill development, elite performance, advanced strategy and tactics
Focus	Sampled a variety of activities, including sports; lots of deliberate play	One or two sports (decreased involvement in others); deliberate practice but still deliberate play	Achieving elite performance in a single activity; more deliberate practice with less deliberate play
Coach Characteristics	Warm and supportive; good with young children; emphasized enjoyment and basic skill development	Coaches more technically advanced in sport knowledge and "serious" about practice and training	Sport-specialist; advanced coaching and training at highest level of intensity

# Unidimensionality = Lack of Psychological Recharge

1. Early specialization has been linked to drop out, burn out, and injury (70-93% more likely injured).

2. Premature emphasis on technical training and deliberate practice may thwart falling in love with a sport.

3. Adolescents engaged in multiple activities tend to have healthier psychological profiles.



(Coakley, 1992; Zarrett et al., 2008)

## Multiple sport participation provides athletes PSYCHOLOGICAL RECHARGE

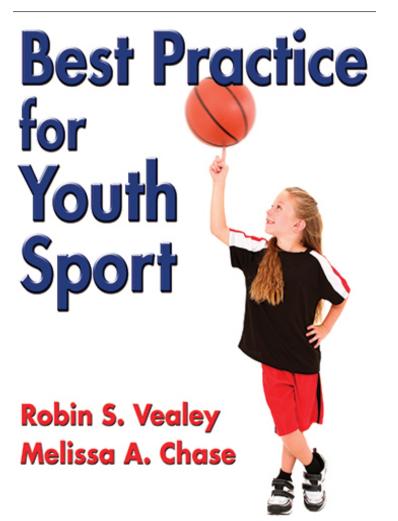


"I would have burned out as a young kid playing just one sport.

Playing basketball for a bit throughout the year gave me the chance to crave soccer, to miss it."

**Abby Wambach** 

# Emphasis on a Multidimensional Approach to Youth Sport Participation



 Build range of mature fundamental motor skills to achieve physical literacy.

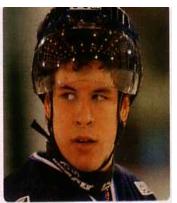
Help nurture their LOVE of the game (not "kill and drill")

3. Enable the adoption of a signature or favorite activity, without mandating rigid specialization.







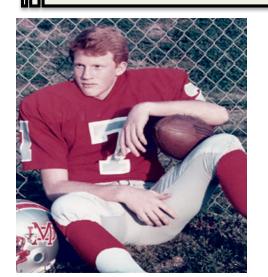


**Diversification** 

**Specialization** 

**Overspecialization** 

#### Narrowing of focus and investment



SPECIALIZATION: an investment in a single sport through systematic training and competition, typically including year-round participation, to pursue proficiency and enjoyment in a signature activity

### **Diversification**

Investment in a broad range of sports and activities



## **Over-Specialization**

When children, often controlled by parents or coaches, pursue expertise and extrinsic rewards in one sport through yearround, systematic training and competition, and sacrifice their psychological development and wellbeing as well as participation in most other activities typical of kids their age



Early, exclusive specialization works for SOME kids in some sports, but there is no evidence that early exclusive specialization works with MOST kids in MOST SPORTS

"It was hard to accept the fact that I was not going to lead a normal teenage life, but I wanted to hold a trophy more than have a sleepover." (Paula Creamer)



"I want to be the best, so whatever comes with that I'll have to accept" (Sidney Crosby)



## Categorizing Sports Based on Specialization Demands (Balyi et al., 2013)



- 1. The more complex the sport, the more crucial is early practice.
- 2. More complex sports require highly developed muscle control and coordination, highly precise techniques, and refined visual tracking abilities
- 3. By assessing the complexity of various sports, they can be categorized as early vs. late specialization sports.



4. Several sports require early engagement (not specialization, but early participation to get the "feel," visual tracking, and decision-making).

**Balyi et al., 2013** 

#### **Examples of early- and late-specialization sports** (adapted from Balyi et al., 2013)

#### **Early Specialization**

#### **Late Specialization**

figure skating gymnastics diving

**Early sport-specific** training (5-7) needed for elite talent development

Specialization at 9-13 years.

Females typically specialize two years earlier than males due to earlier maturation.

**Early Engagement** 

tennis skiing swimming ice hockey basketball baseball softball soccer field hockey

Early engagement for feel and balance, visual tracking, and complex decisionmaking (8 or younger).

**Specialization not** necessary until 14-16. **Common Late** 

football speedskating wrestling track and field canoeing volleyball golf lacrosse

karate

"Common" means they require specialization at typical time of 14 to 16 years

**Very Late or Transfer** 

bobsled cycling rowing kayaking

Require high amounts of power and volume of training.

# Study of 708 minor league professional baseball players

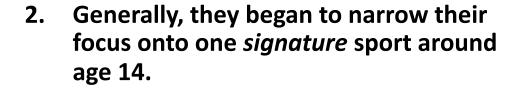
- Although average starting age was 6 years, the players' average age of specializing in baseball was 15 years.
- The majority of players (52%) did not specialize until at least 17 years of age.



Ginsburg et al., 2014

#### **Talent Development Pathways of Elite Athletes**

 Expert athletes tended to participate in many activities, emphasizing deliberate play and enjoyment, until age 13.





3. 7 in 10 Olympic athletes played multiple sports growing up.

(Aspen Institute Project Play; Cote et al., 2003; Fraser-Thomas et al., 2008; Ginsburg et al., 2014; Gulbinet al., 2010; Strachan et al., 2009)

4. So we know early specialization is not required for expertise in most sports.

# So why is multidimensionality resisted in youth sport?



1. Short-term performance increases are evident (focus on long-term development and physical literacy; "grow and bloom" timing model).

2. Coaches unwilling to share an athlete with another team (coaches work together to share and schedule athletes, putting athletes first).

3. Parents fearing multidimensionality might cost a college scholarship (education, explanation of multiple pathways, popular examples).

## Does it make sense to apply specialization model to all kids?

 2% of high school students will play college sports

 Only 1% of these will get "full ride" scholarships to NCAA Division I programs

 A very small percentage of the 1% will become professional or Olympic athletes



#### And for elite talent, is EARLIER and MORE really better for longterm development?



"I think we're all well-intentioned in wanting our kids to have the best opportunities possible.. And wanting our national teams in soccer to develop as well as possible...

It may be counter-intuitive, but if we actually slowed them down a little bit and let them do some other [sports]... we might actually see better results."

Dr. Matt Bowers, University of Texas

### **Emphasizing Multidimensionality**



Tim Howard, midfielder as youth



Hope Solo, forward as youth

- Avoid restricting athletes from diversification through high school participation.
- 2. Avoid early specialization within sports
  - When winning supersedes skill development as the objective, coaches focus on tactics and position specialization
  - Early position specialization makes no sense prior to maturation

Remember WHO it is ALL ABOUT in youth sport!

#### "Jewels" of Multiple Sport Participation

#### **Strong Physical Literacy**

Better overall physical skills
Better creativity
Better decision-making
Versatility/Adaptability







#### **Psychological Recharge**

Stimulation through variety
Less burnout
Enjoyment
Reduced pressure

#### **Cross-Training**

Injury prevention
Trains different
systems (aerobic and
anaerobic)

## **Enhanced Social Experiences**

Different team cultures, roles, and communication requirements

## There are MULTIPLE PATHS for kids on their way to physical literacy and/or elite sport.

