AUT

AUT Talent Development Conference

Developing Skillful Athletes

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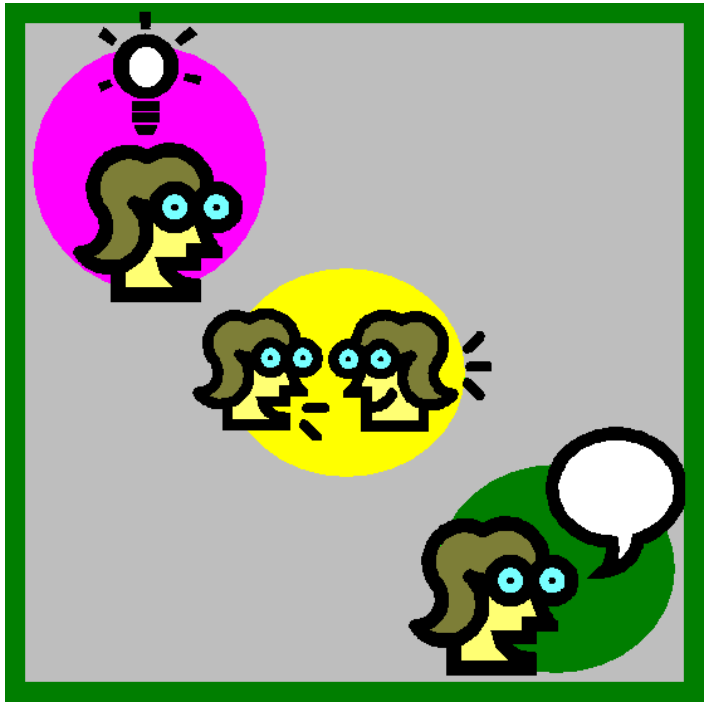
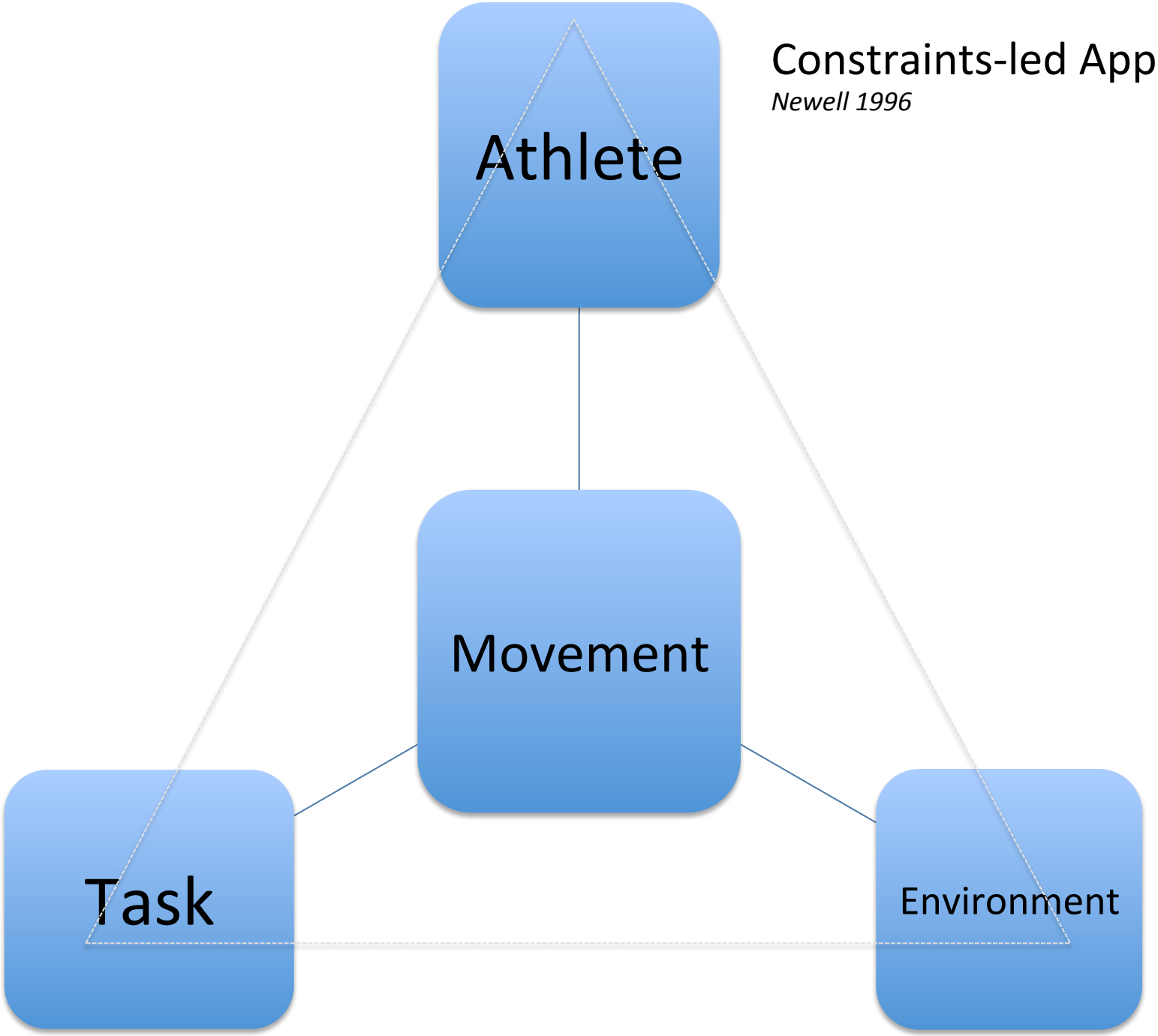
Skillful Athletes

SKILLFUL?

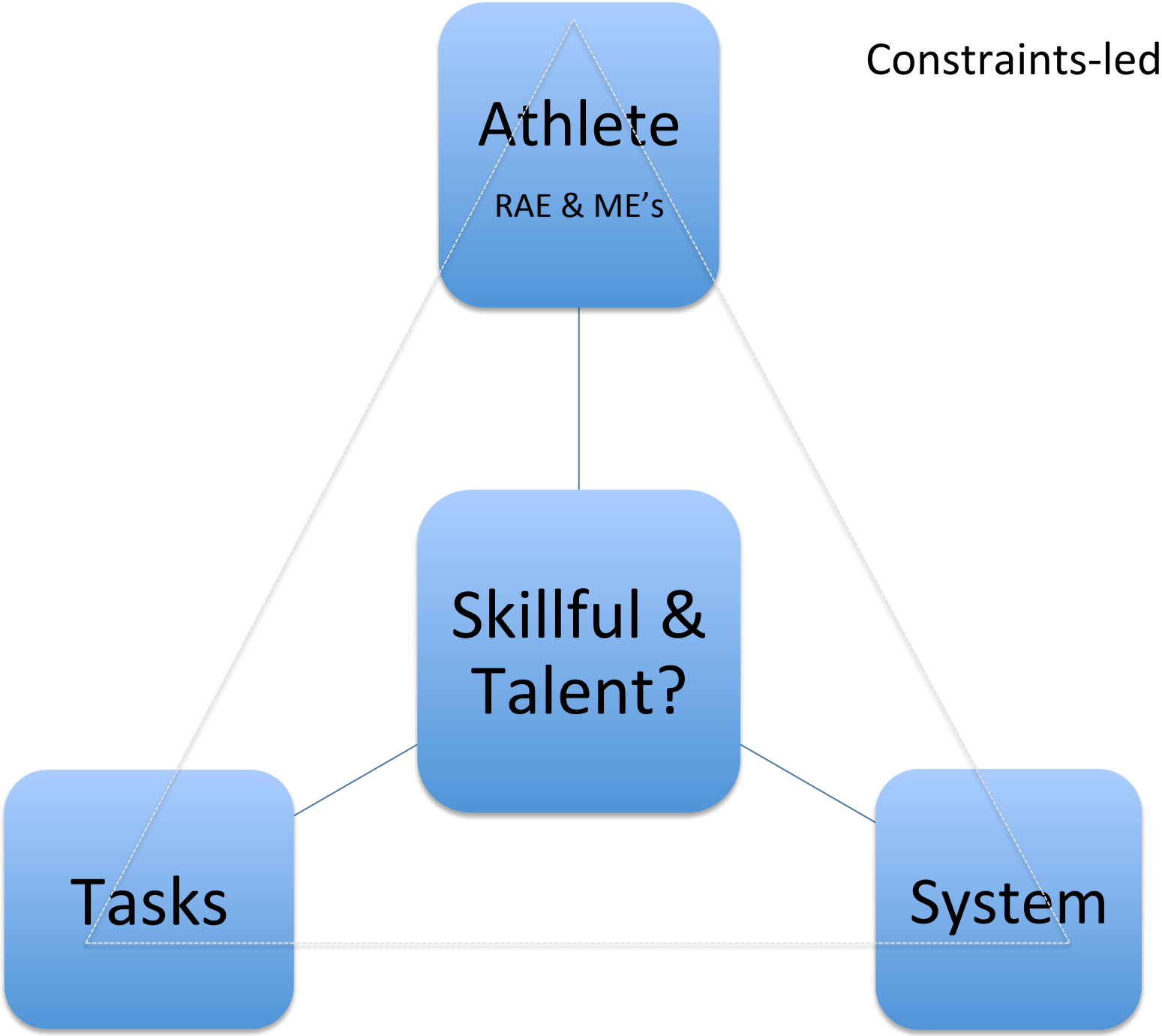


SKILLFUL?

Constraints-led Approach,
Newell 1996



Constraints-led View



Relative Age Effect (RAE)

The relative age effect (RAE) has been described as the consequence of differences in ages between individuals within the same age group. In youth sports, relatively older children may have a physical and developmental advantage over younger children. i.e. An almost 12 month age difference in age

SPORT

- Categorizing children's skilled performance (in FMS) based on rounded down values of whole-year age may disadvantage children born relatively later in the selection year, whereas children born earlier in the selection year will likely evidence greater skill mastery and subsequent advantage for selection purposes.

INJURIES

- Relatively younger children displayed a higher risk of injury, when compared with their relatively older peers (*Stracciolini, A et al., 2016).* Young athletes with a low body mass index (BMI) are more likely to sustain fractures, as compared to normal and high BMI athletes in football (*Yard E, Comstock D. 2011)*

ACADEMIC:

- RAE remains an explanatory factor in academic performance even in eighth graders. RAE then decreases as the influence of schooling increases (*Navarro, J. J., Garcia-Rubio, J., & Olivares, P. R. 2015).*

COACHES

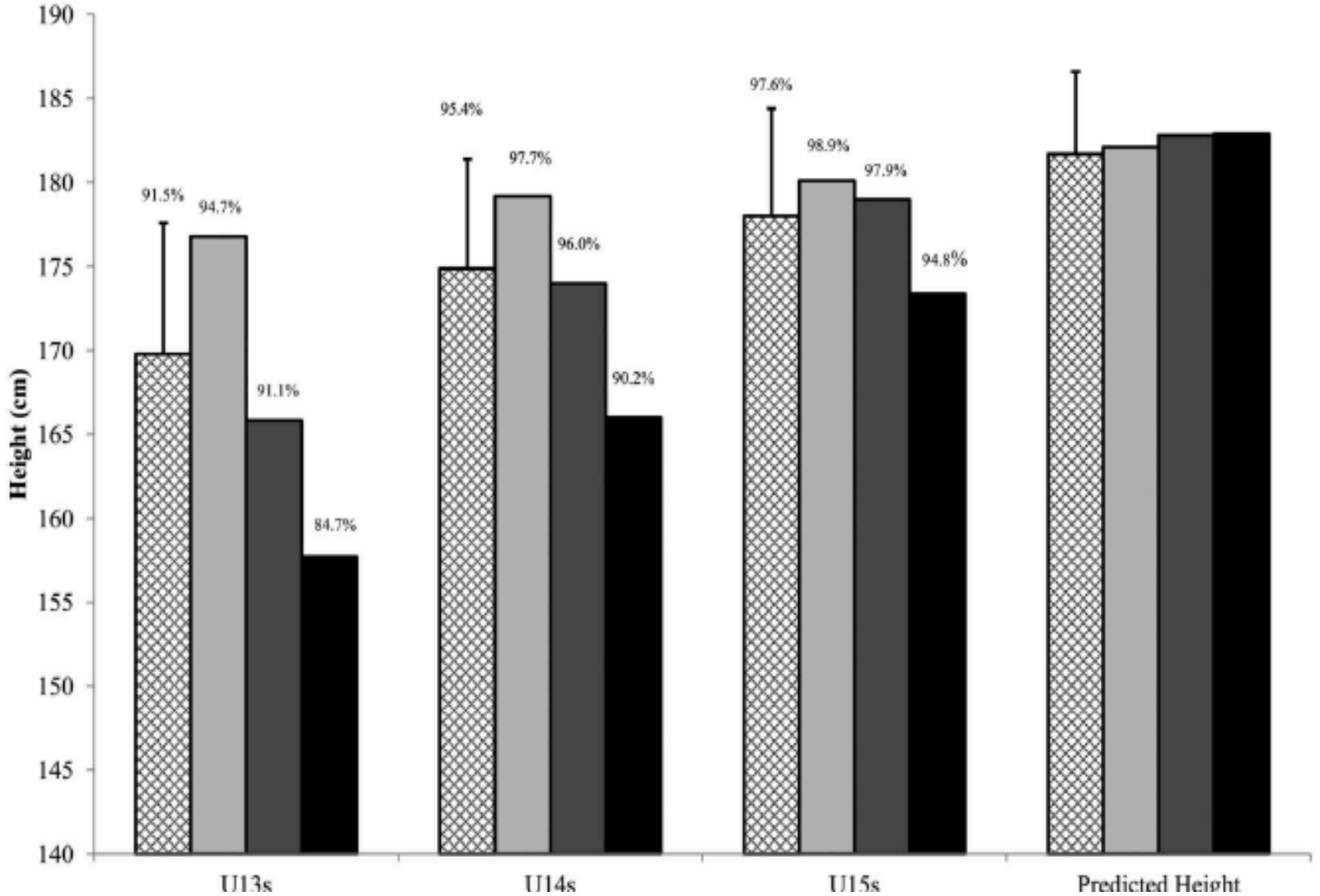
- Coaches' awareness of RAE did not eliminate nor reduce it. Due to pressure from; the nature of their profession and career goals, the existence of competing decision-makers such as peers and parents, and the tension to select players for immediate success (*Hill, B., & Sotiriadou, P. 2016)*

+ Maturity Effects

- **Maturation** – the timing and tempo of progress toward the mature adult state. During adolescence maturation can vary considerably between individuals. Maturation is often classified at the age of peak height velocity (PHV) – Early, on-time or late developers.

- Relatively younger athletes seem to have a chance of selection only if they are early maturing (*Muller, L., Muller, E., Hildebrandt, C., & Raschner, C. 2016)*.
- Links to drop out of sport – competence and size (maturation) (*Crane and Temple, 2015).*

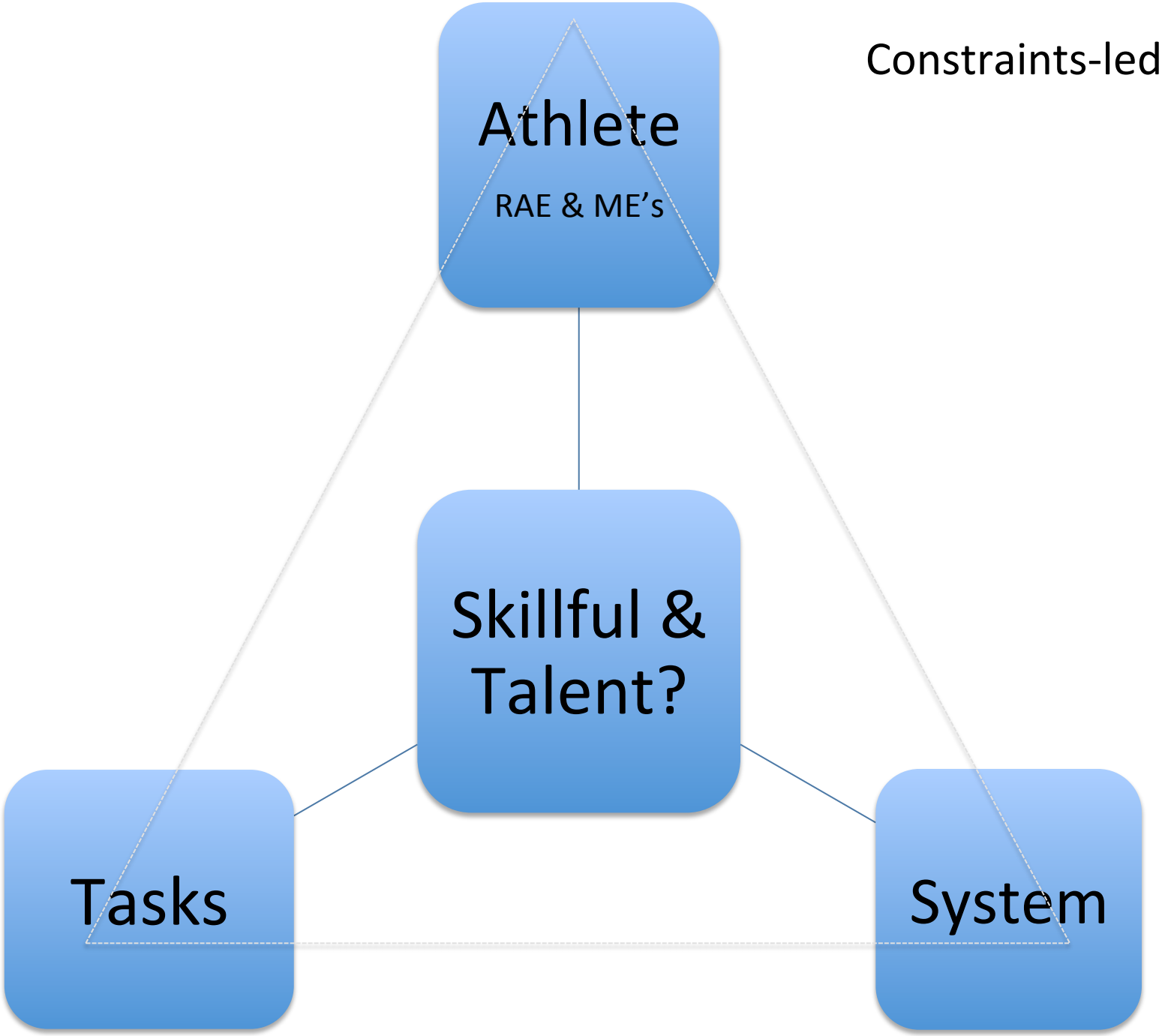
- Coaches' selection decisions and in turn account for RAE as coaches are biased towards physically more matured players, even when no apparent performance advantage is evident. (*Furley, P., & Memmert, D. 2016).* Taller players were associated with positive performance-related attributes, whereas smaller players were associated with negative attributes.



Height and percentage of predicted height of each player at under 13s, 14s, and 15s.

Adapted from Cobley, S. P., Till, K., O'Hara, J., Cooke, C., & Chapman, C. (2014)

Constraints-led View



Skills and movements???

QU: What skills or movements does each player use to be successful?

Goal Shoot (Shooter) (Dan)	Goal Keep (Defender) (Alana)
Skills/Movements • • • • • •	Skills/Movements • • • • • •

Skills and movements???

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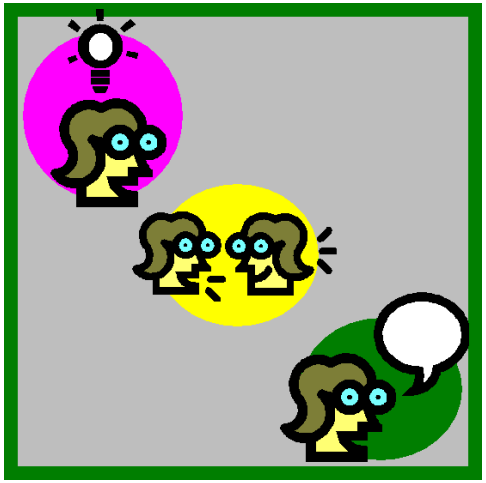
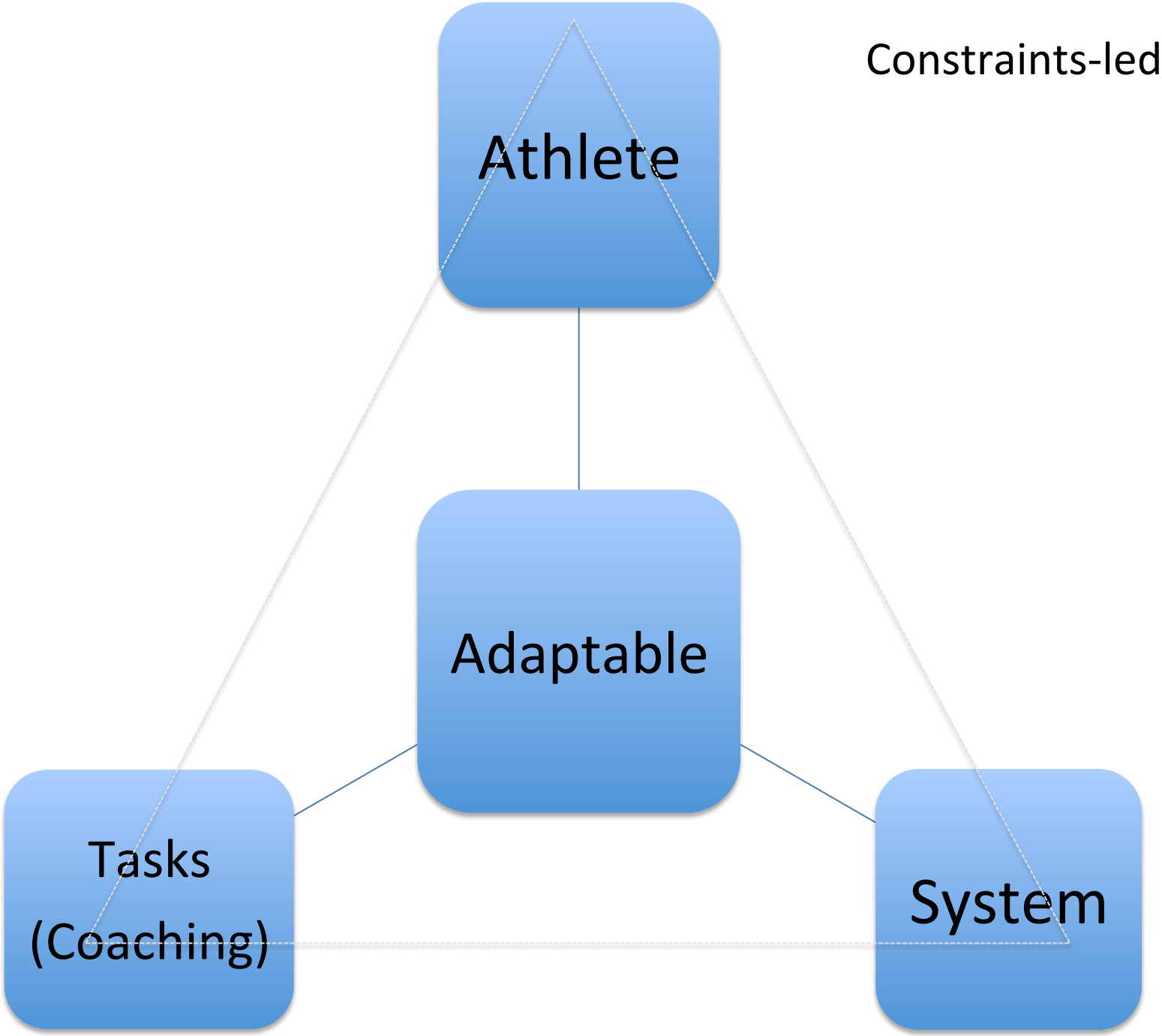


Hunt for height……

Constraints-led View



Tasks – coaching

Planning for learning

RETENTION
TRANSFER

- Performance vs learning
- Learning is messy
- Confidence

Your context

Athlete	XXXX
Does well now….	•
Needs to be able to…	•
Constraints that could be used to help them	• • •
Signs that they are improving	• •

References

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Thoughts? Questions?

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