



Rethinking Soccer: What an Ecological Dynamics Framework could off skill, learning and development – Session 3

# Session Intentions

- What does an Ecological Dynamics Framework offer youth development?
- Learning through exposure
- Enrichment v Specificity



What's the purpose of youth soccer?!



# Ecological Dynamics for Youth Development

“An ecological dynamics conceptualisation of learning clearly impacts how a practitioner would go about ‘educating’. For example, rather than attempting to ‘instill’ or ‘drill’ idealised ways of being or doing into the minds of those who are presumed to be ignorant (Ingold 2000), an educator would work with a child, guiding them along a path of active self-discovery to help them ‘know as they go’ (self regulate) (Dreyfus and Dreyfus 1986; Ingold 2000; Woods et al. 2020).”

Rudd, J.R., Woods, C., Correia, V., Seifert, L. and Davids, K. (2021). An ecological dynamics conceptualisation of physical ‘education’: Where we have been and where we could go next. *Physical Education and Sport Pedagogy*, pp.1-14.



# An Ecological Approach to Learning and Development

“Perceiving is active, a process of obtaining information about the world (J. J. Gibson 1966). We don't simply see, we look. The visual system is a motor system as well as a sensory one. When we seek information in an optic array, the head turns, the eyes turn to fixate, the lens accommodates to focus, and spectacles may be applied and even adjusted by head position for far or near looking.”

“Adjustments of the perceptual system are often, especially in early life, exploratory in nature because the young creature is discovering optimal means of adjustment. But they may be exploratory even in a skilled observer, because they are used to seek information. We live in interaction with a world of happenings, places, and objects. We can know it only through perceptual systems equipped to pick up information in an array of energy, such as the optical array. Furthermore, time is required for the adjustment of the perceptual system, for the monitoring of the information being acquired, and for the scanning required by most perceptual systems to pick up information (perceiving an object by touching, for example, or locating a sound source through hearing). Information, accordingly, is picked up over time. Thus if a stable world is to be discovered, there must be temporal invariants of some kind that make constancy of perception possible. I take for granted that perceptual acts extend over time. Perceiving and acting go on in a cycle, each leading to the other.”

Gibson, E.J., 1988. Exploratory behavior in the development of perceiving, acting, and the acquiring of knowledge. *Annual review of psychology*, 39(1), pp.1-42.



# Expanding the youth players toolbox

Away from early specialization

Promote early diversification

Enrich the learner's movement capacities



# Enrichment v Specificity

More Specificity Focused Activities

More Generality Focused Activities

More Representative of the performance environment.

Less Representative of the performance environment.

# Athletic Skills Model

- ASM – a model that supports practitioners in finding the key balance between generality and specificity in training.
- Utilise *Donor Sports* (e.g Strafford et al. 2018 with parkour).
- Uses principles of NLP to support *when* to emphasise general motor—learning experiences and *when* to undertake more specialized activity.



# The role of Donor Sports in player enrichment

*“Donor sports should promote transfer of varied and specific movement experiences across a range of non-specific and specific practice environments which support performance functionality at the moment of specialisation [14]. This approach to skill learning requires a careful and continuous transition between generality (non-target sports and activities) and specificity (engaging with various forms of a target sport) of transfer [15]. Practice tasks should develop general capacities that underpin functionality of each athlete’s current intrinsic dynamics and perceptual skills (e.g. anticipation, visual search, strength and postural stability) under a new set of performance constraints” (Strafford et al., 2018).*



# CoachING : The role of instruction and feedback

## Explicit Instruction v Instructional Constraints

Cordovil et al. (2009) conservative v risk taking constraints – performer intentions shaped by the use of instructional variables.

Lopes et al. (2012) instructional constraints on attacker-goalkeeper dyad in a penalty kick.

PK taker i) choose an area to place the ball ii) choose where to place the ball based on GK movement

Goalkeeper iii) Stay still as long as possible iv) jump side-to-side

“To summarise, this study demonstrated that, although different instructional constraints shaped the emergent spatial-temporal variables of performance, participants maintained similar levels of performance efficacy, underscoring their ability to adapt their actions to differing task constraints.”



# Skill *Adaptability* over Skill *Acquisition*?

“But the phrase ‘skill acquisition’ may be somewhat misleading due to cognitive psychology’s inherent organismic asymmetry, inducing the notion of skilled behaviour as an object, state entity to be acquired and maintained by the learner.. In this respect, learning may be more about changing the relationship that an individual establishes with the surrounds in a particular performance context. Rather, processes of skill adaptation or skill attunement may be more unbiased terms for psychologists to consider.” (Araujo and Davids, 2011)



# Implications for practice

Free play – explore and exploit

What are my players needs right now?

Lots of exposure, lots of choice, lots of experiences

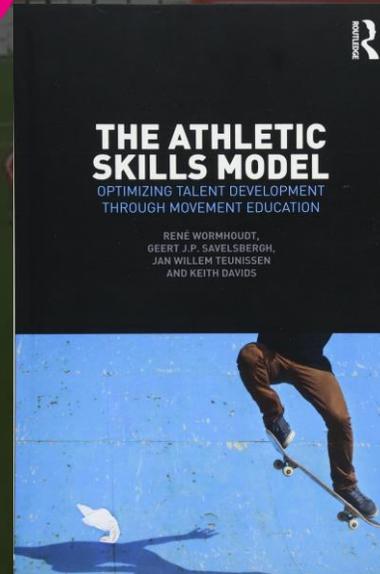


# Useful Resources

Boing Kids Play Tank



The Athletic Skills Model



The Magic Academy

