

Intervention Design from an Non-Linear Pedagogy Perspective

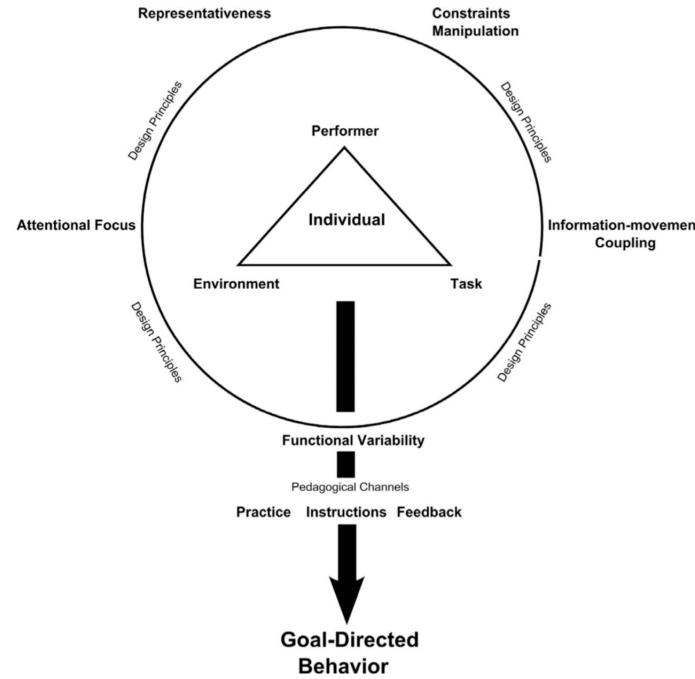
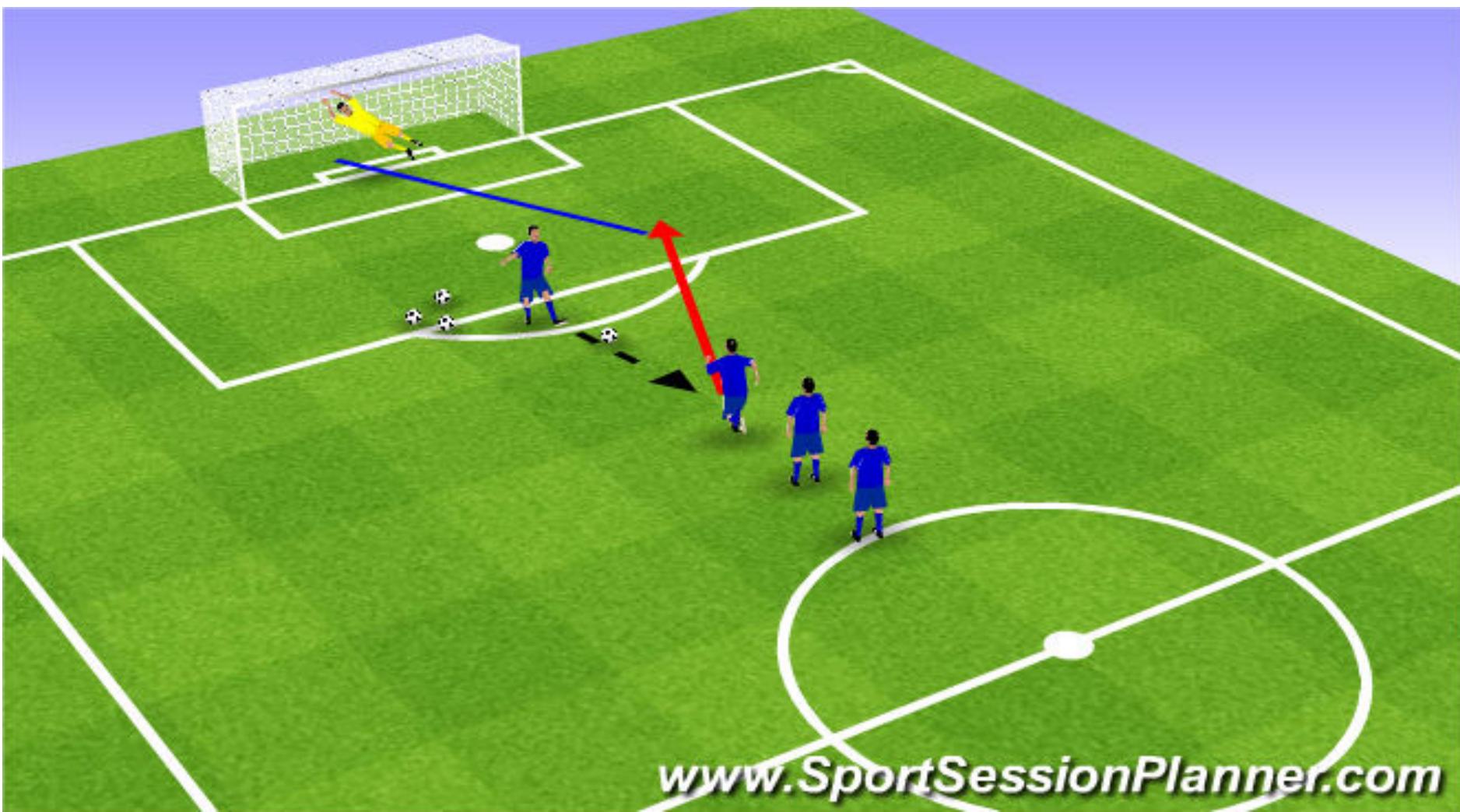


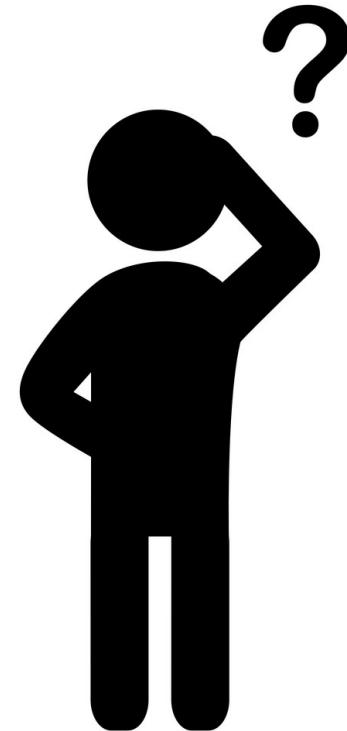
Figure 1. Conceptual framework for nonlinear pedagogy.

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- Pros and Cons?

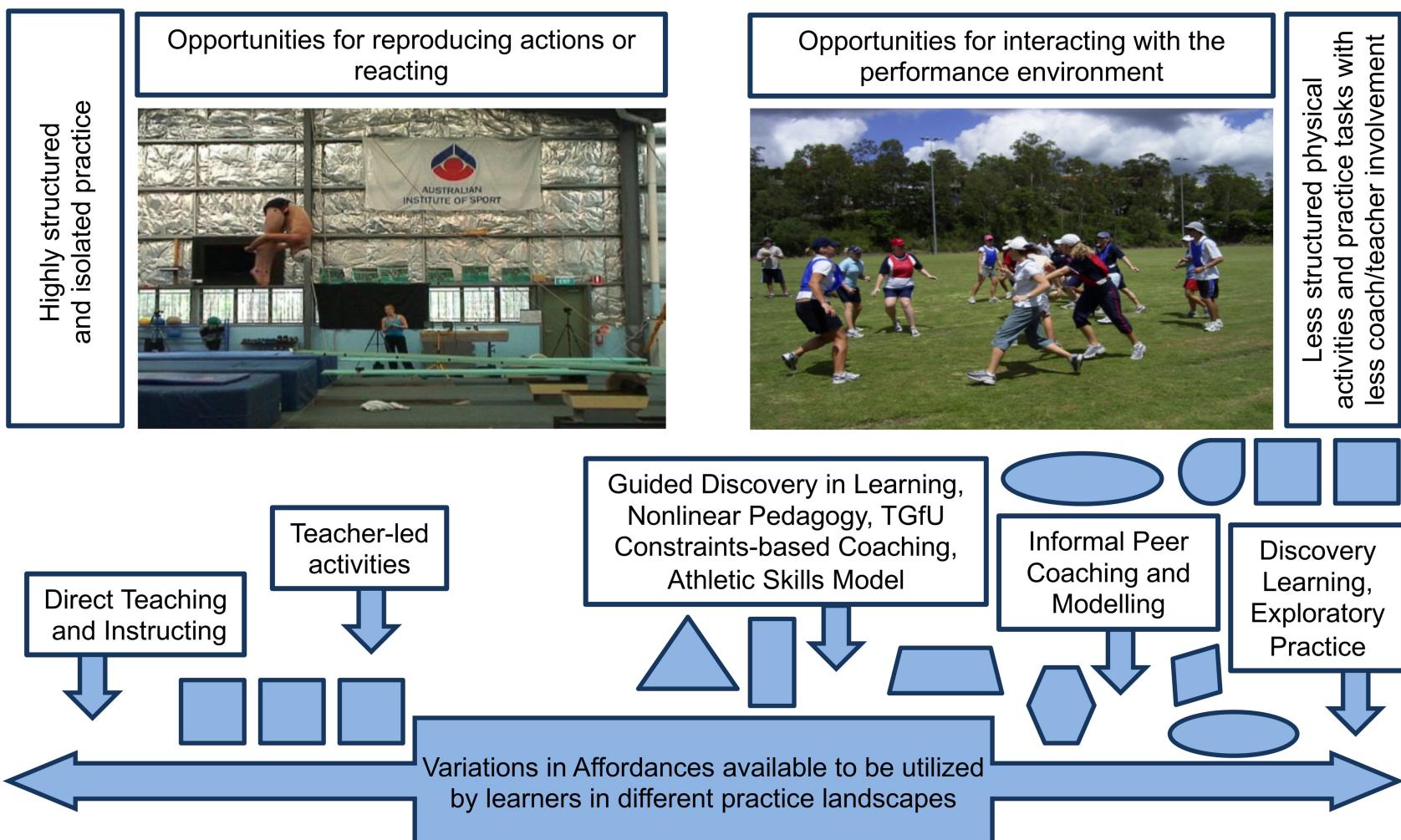


- What could be an **alternative** to just providing deliberate, instruction based, coach-led practice?



Sheffield Hallam University

Figure 1. A Continuum of Practice Designs with different affordances on offer for learner. At one end, learners are typically directed to fewer affordances on specified areas of the learning landscape by instructors (symbolized by the uniform shapes, few in number). In contrast, a more diverse and extensive range of affordances on offer at the less structured end of the landscape for practice design (symbolized by the rich and varied shapes and sizes available).



Non-Linear Pedagogy (Chow 2013)

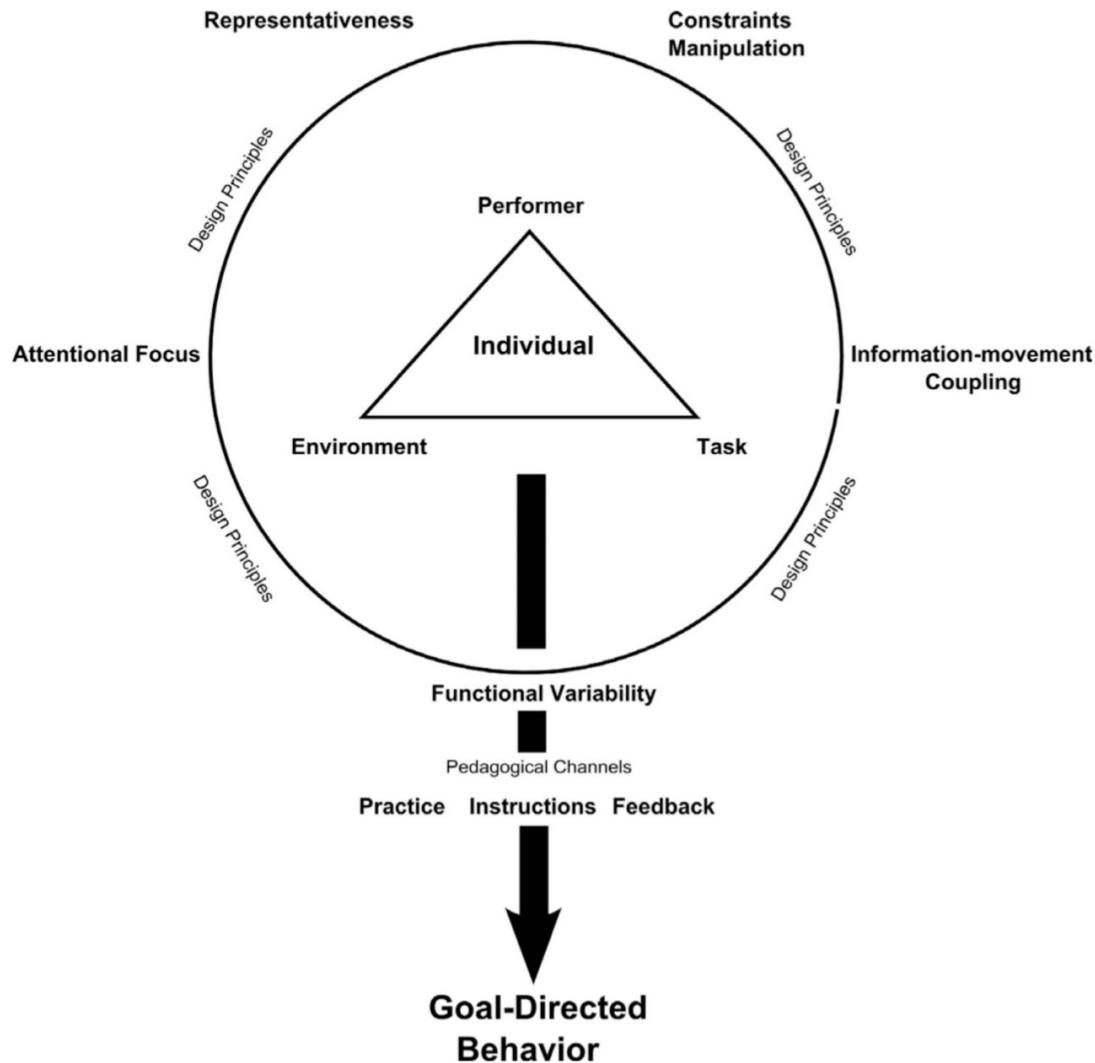


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Effects of Lawn Tennis Association mini tennis as task constraints on children's match-play characteristics

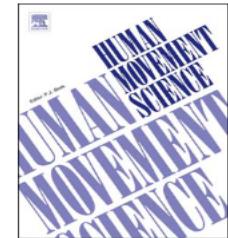
Anna Fitzpatrick, Keith Davids & Joseph Antony Stone



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Full Length Article

Effects of scaling task constraints on emergent behaviours in children's racquet sports performance

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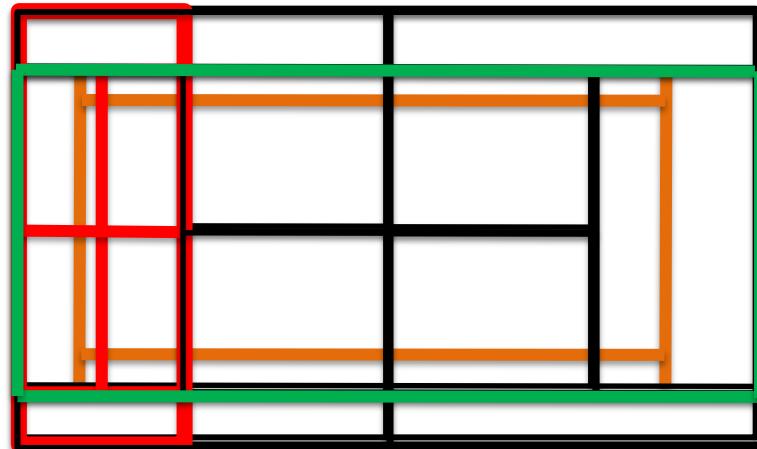


Effects of scaling task constraints on emergent behaviours in children's racquet sports performance

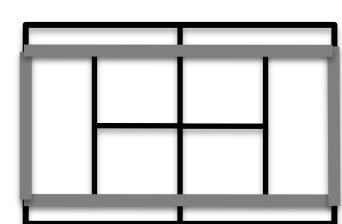
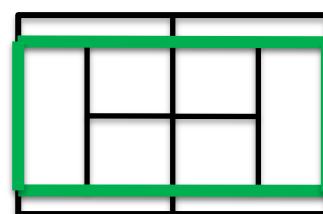
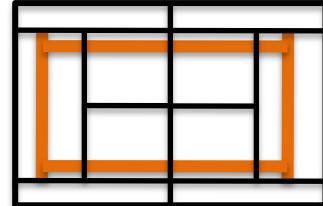
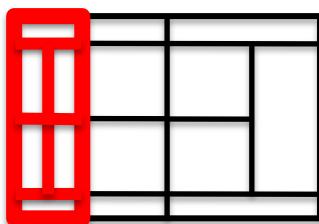
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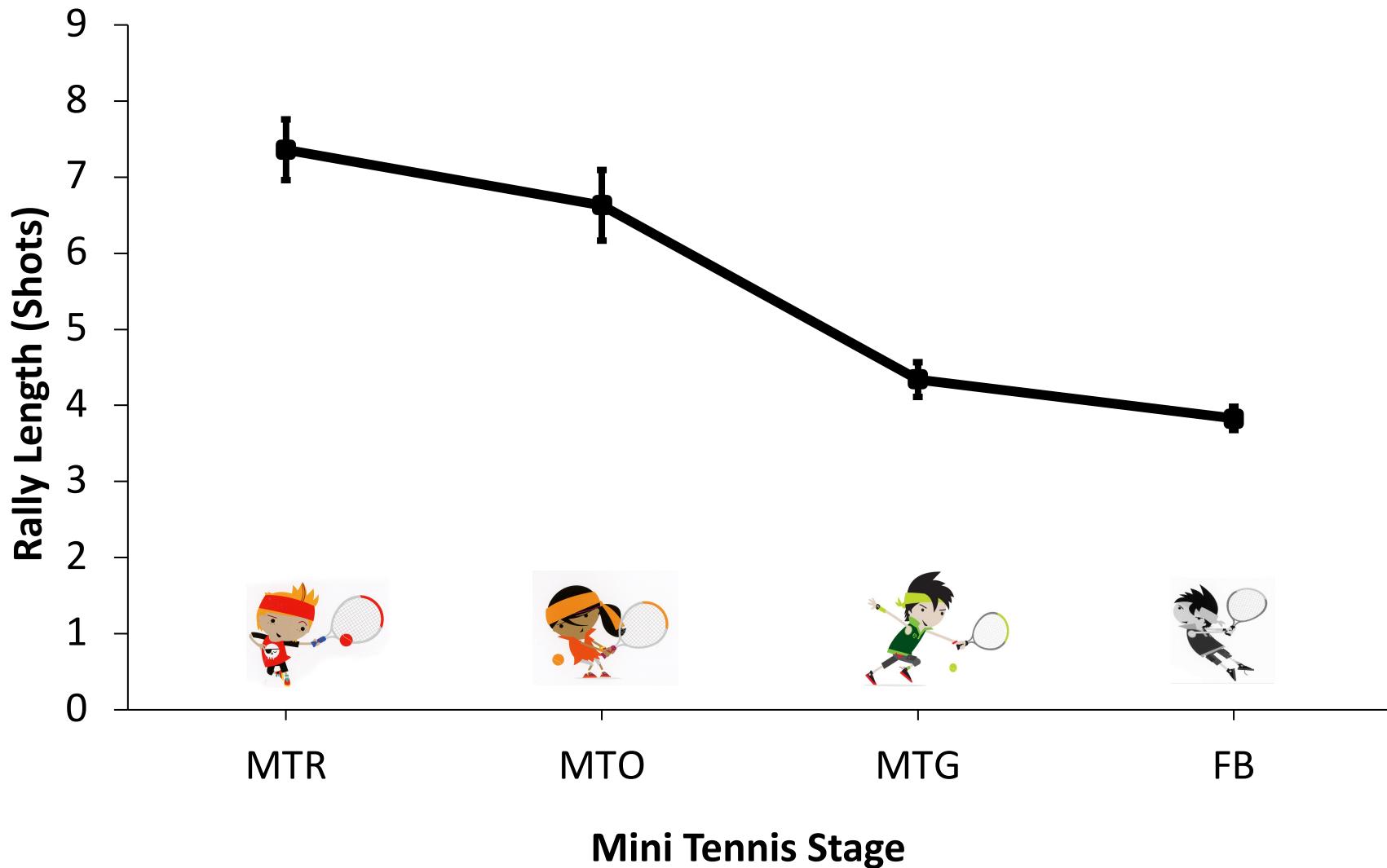


48 Children, Match Play, Notational Analysis



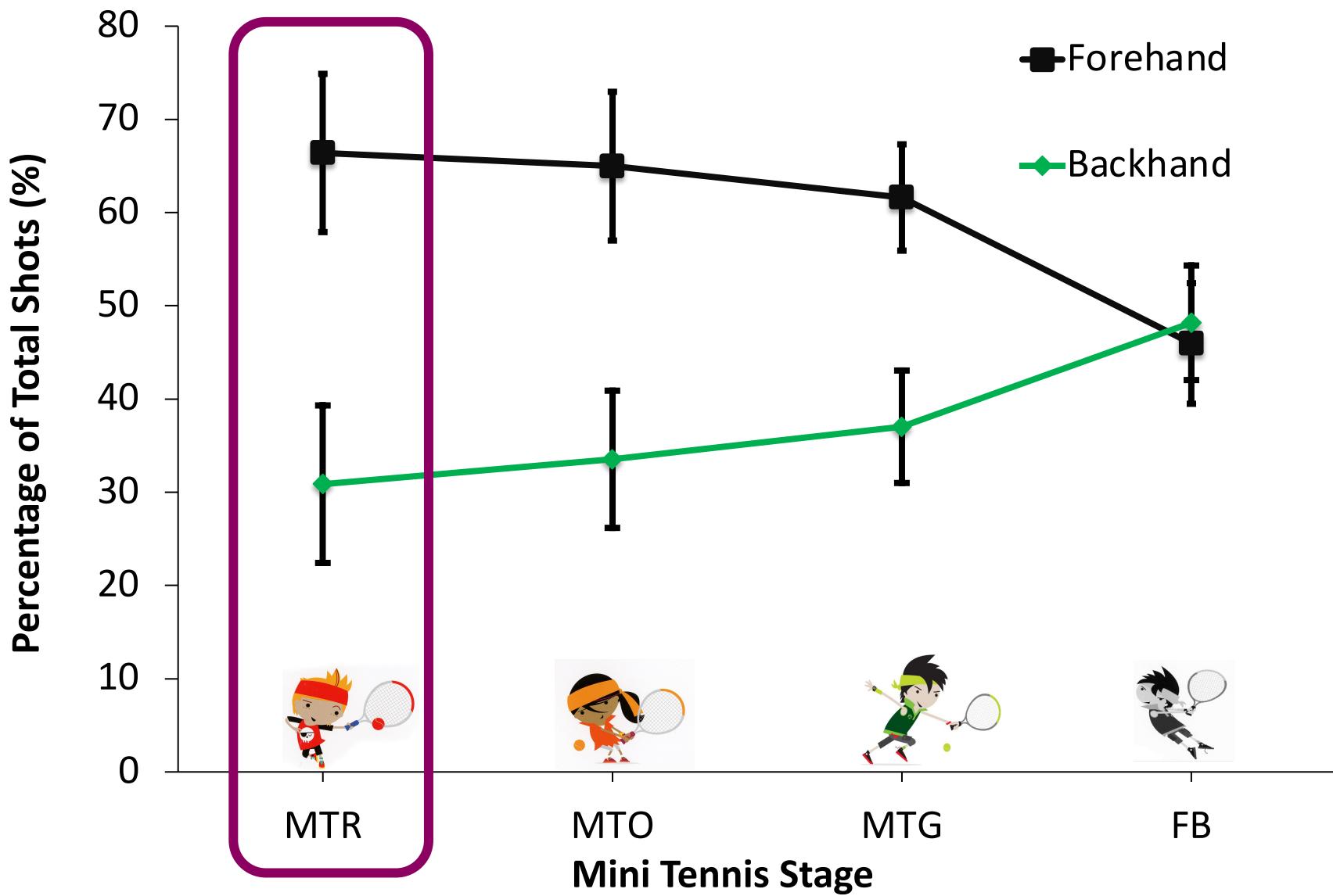
(Fitzpatrick, Davids & Stone 2017)

Rally Length



What's the issue here?





Task

How could you as the coach help solve the issue of running around the ball?

- Two groups
- **Control** ($n = 8$, age = 7.2 ± 0.6 years)
- **Experimental** ($n = 8$, age 7.4 ± 0.4 years)



- 1 hour practice per week for 8 weeks

Activity	Duration (minutes)
Introduction and group warm-up	6
Skill practice 1	12
Skill practice 2	12
Competition/points-based activity	15
Fun, skill-based game	10
Cool down and session review	5

Experimental Manipulations

Pre-Test

Control (n=8); Experiment (n=8)

Match play & technical skill



8 Week Intervention

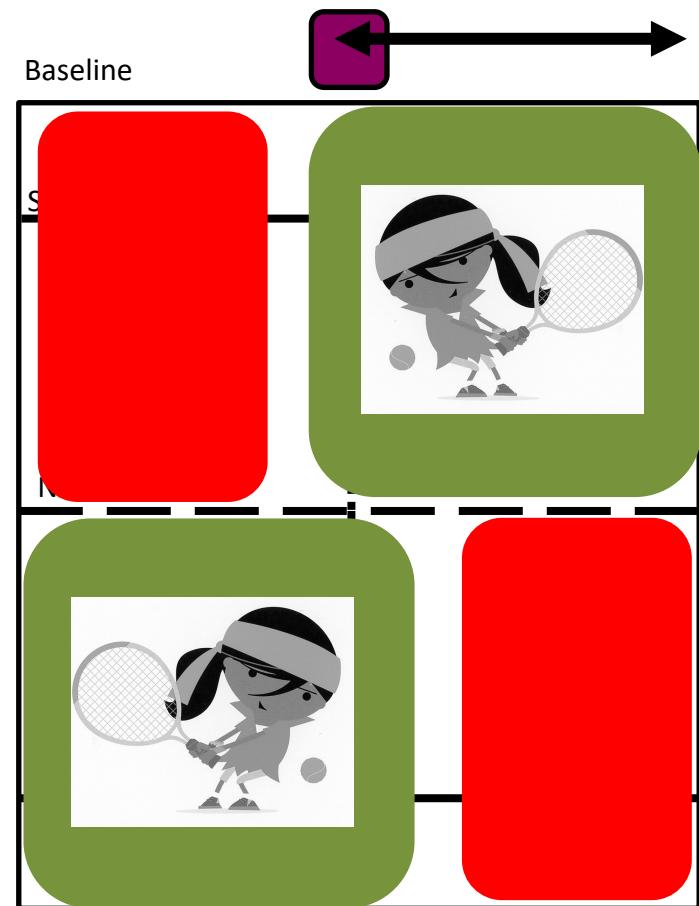
1 hr practice per week

Same practice sessions for

control and **experimental** group



Post-Test

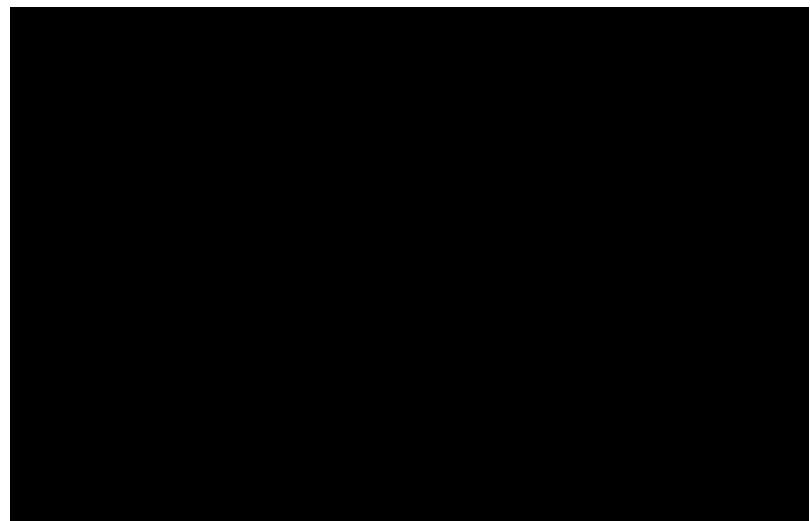
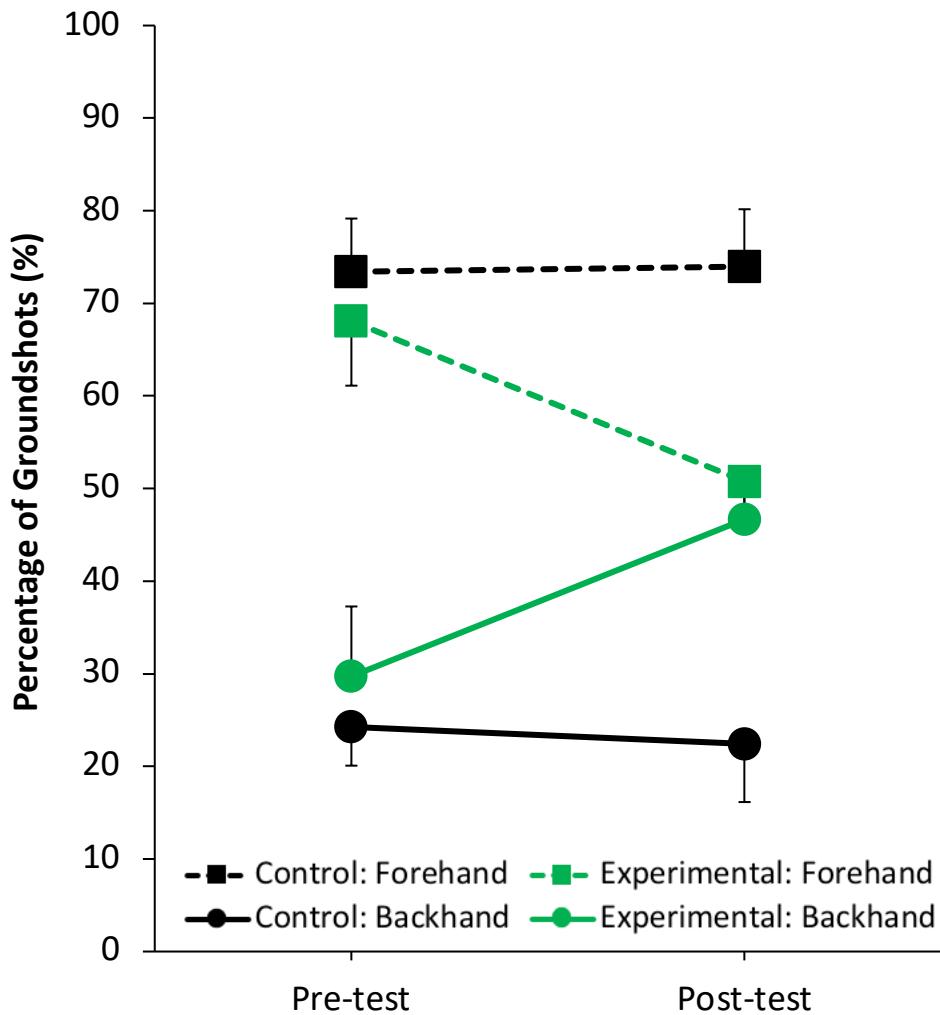


Bonus points were awarded by the coach if a participant created a perturbation using their backhand

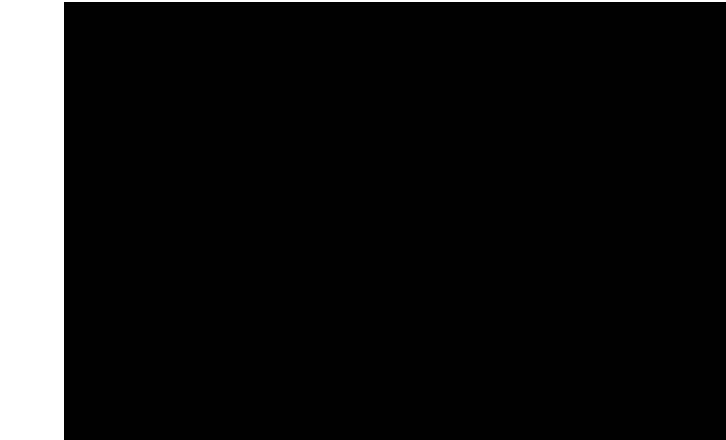
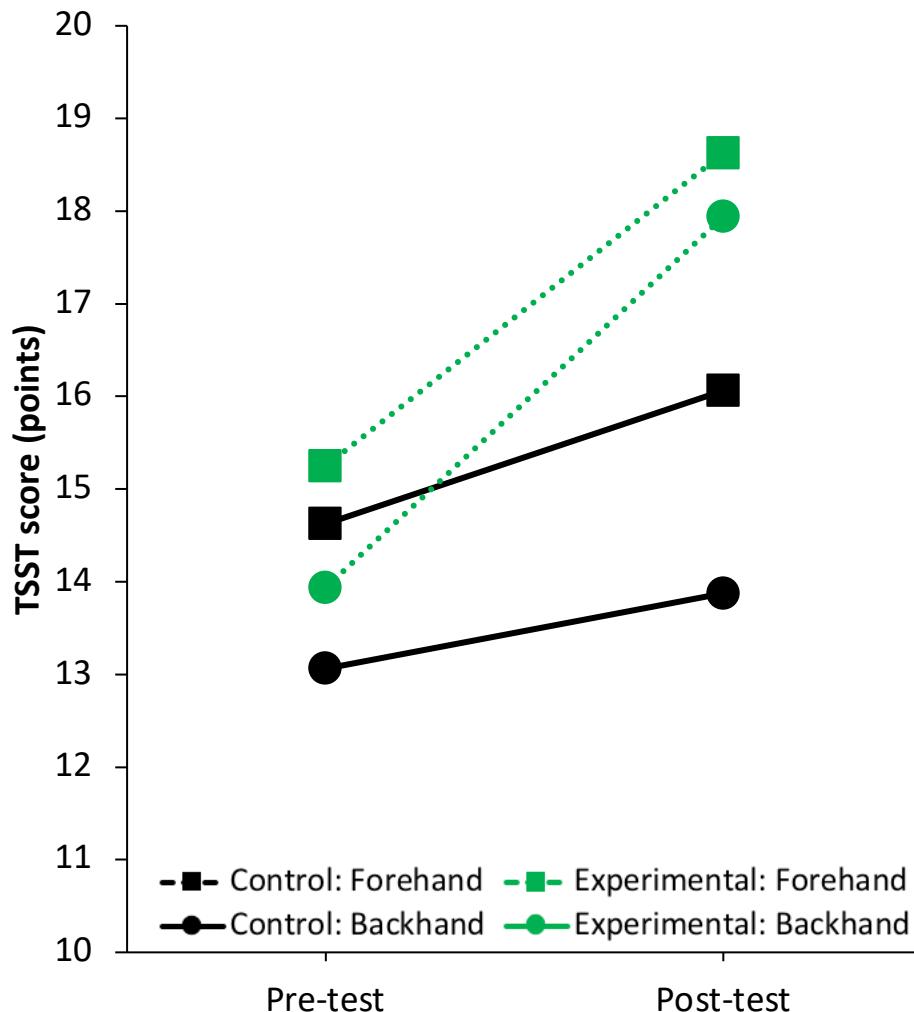
Strokes Per session

- The control group played **117.0 (± 7.7)** strokes per session, the experimental group played **120.3 (± 8.3)** strokes per session
- Therefore, differences in outcome variables were **not** attributable to **differences in frequency** of actions practiced

Percentage Groundstrokes



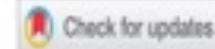
Technical Performance



Careful consideration
needs to be applied when
manipulating/scaling
constraints in practice

Corner Kicks in Women's Football

INTERNATIONAL JOURNAL OF PERFORMANCE ANALYSIS IN SPORT
<https://doi.org/10.1080/24748668.2019.1677329> 



Analysis of attacking corner kick strategies in the FA women's super league 2017/2018

Hannah Beare and Joseph Antony Stone 

Academy of Sport and Physical Activity, Sheffield Hallam University, Sheffield, UK

Effect of set play tactics

- Set plays account for **30% to 40%** of goals scored in elite men's soccer
- **Corner kicks** are largely ineffective (2.1% to 2.9% goals scored), but are influential in the final result of the match (68% of goals scored affect the result)

INTERNATIONAL JOURNAL OF PERFORMANCE ANALYSIS IN SPORT
<https://doi.org/10.1080/24748668.2019.1677379>



Comparative analysis of the top six and bottom six teams' corner kick strategies in the 2015/2016 English Premier League

Ben William Strafford ^a, Adam Smith ^b, Jamie Stephen North ^c
and Joseph Antony Stone ^{a,d}

Background

- Limited research examining **set plays** within **women's soccer**
- The aims were to **determine the effectiveness** of different types of **corner kicks** and identify **key variables** associated with attempts on target and goal scoring



INTERNATIONAL JOURNAL OF PERFORMANCE ANALYSIS IN SPORT
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Routledge
Taylor & Francis Group

Analysis of attacking corner kick strategies in the FA women's super league 2017/2018

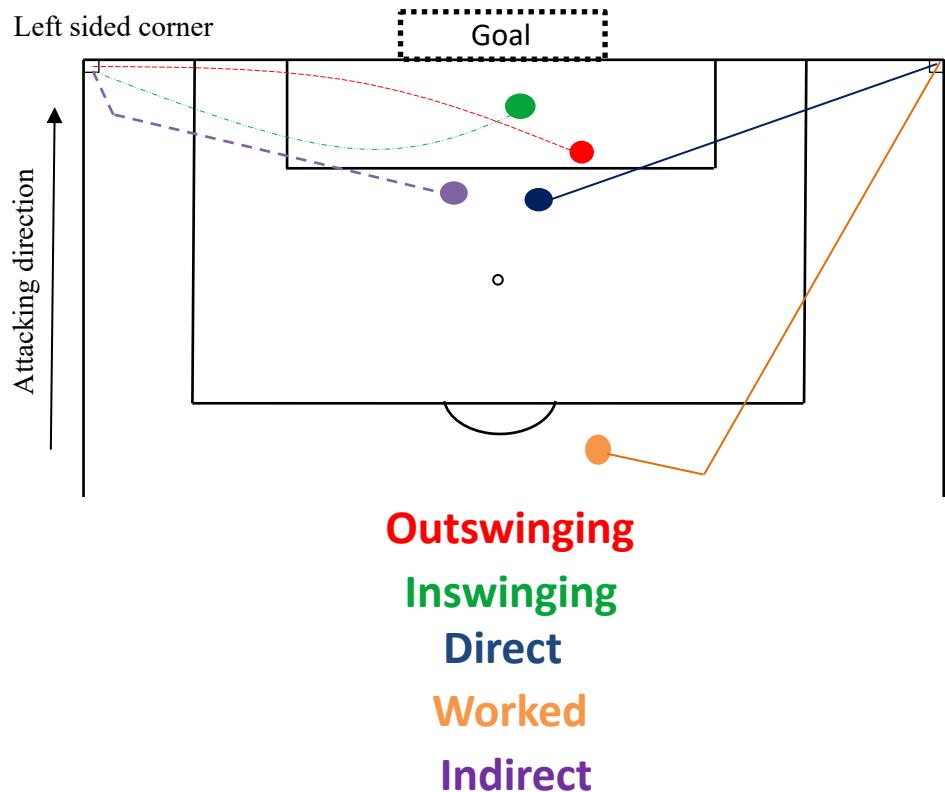
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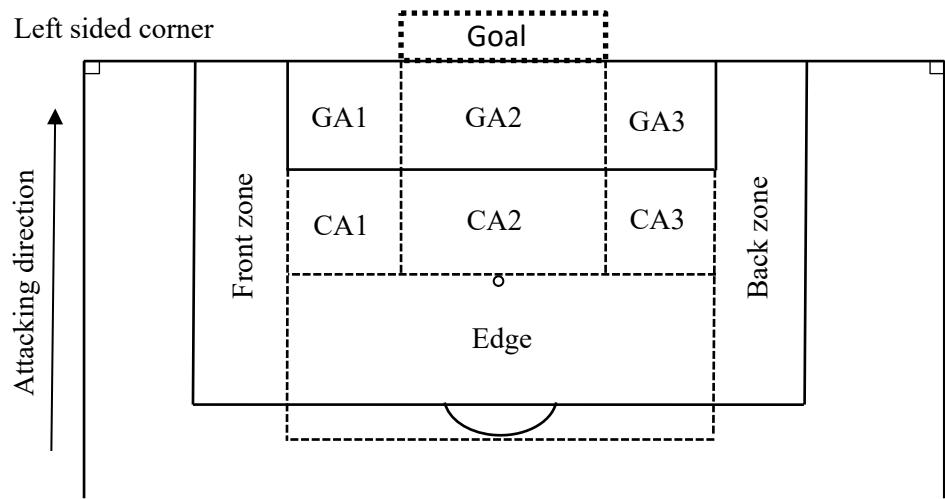
Method

- 17-18 Season (89 matches): 824 corner kicks**

- 17-18 Season (89 matches): **824** corner kicks
- Delivery type



- 17-18 Season (90 matches): 824 corner kicks
- Delivery type
- Delivery area



Based on Casal et al. 2017

- 17-18 Season (90 matches): 824 corner kicks

- Delivery type

- Delivery area

- Corner kick outcomes

Goal

Attempt on Target

Attempt off Target

Free Kick or Penalty

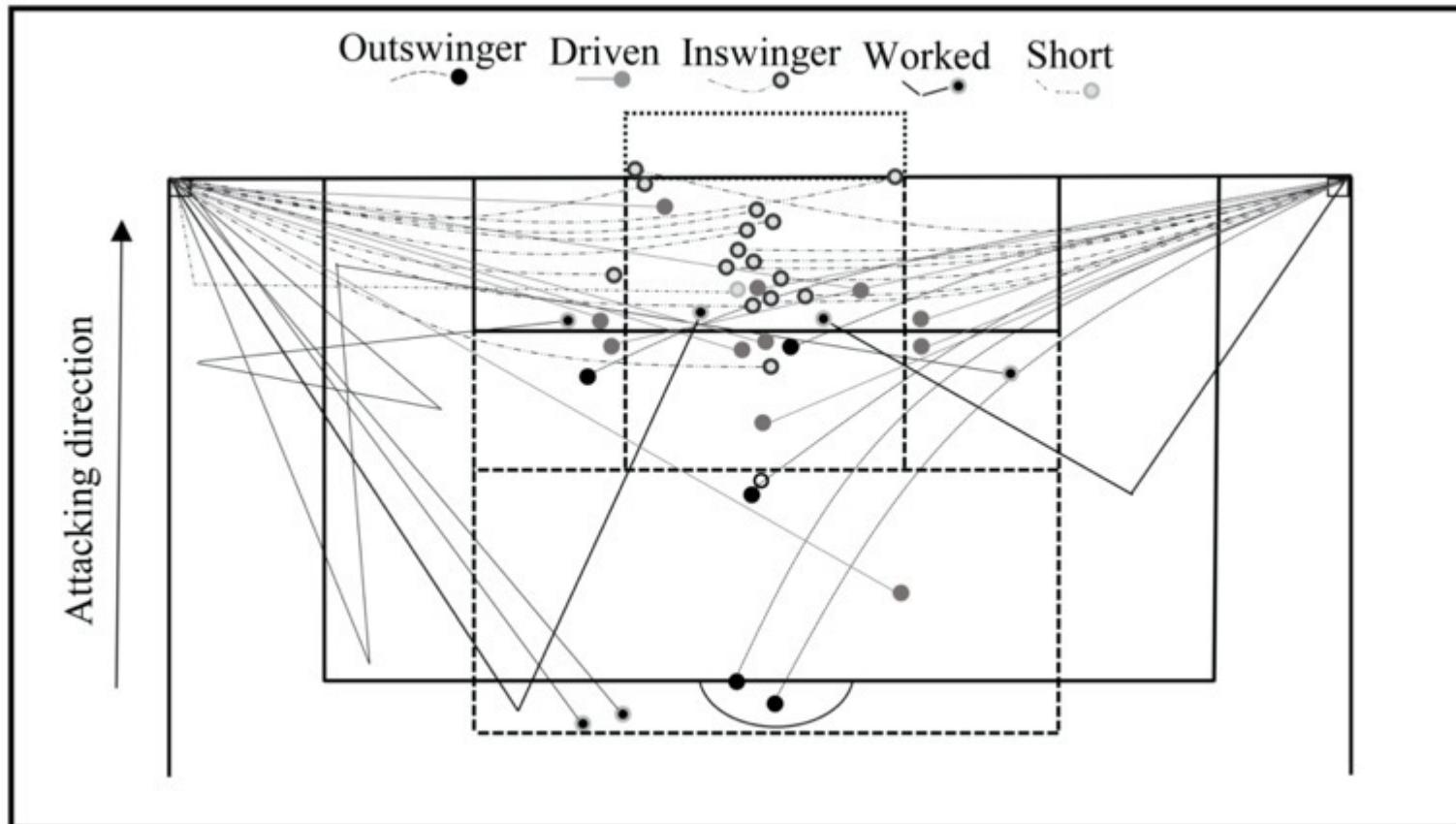
Defensive Block

Goalkeeper catch/punch

Loss Possession

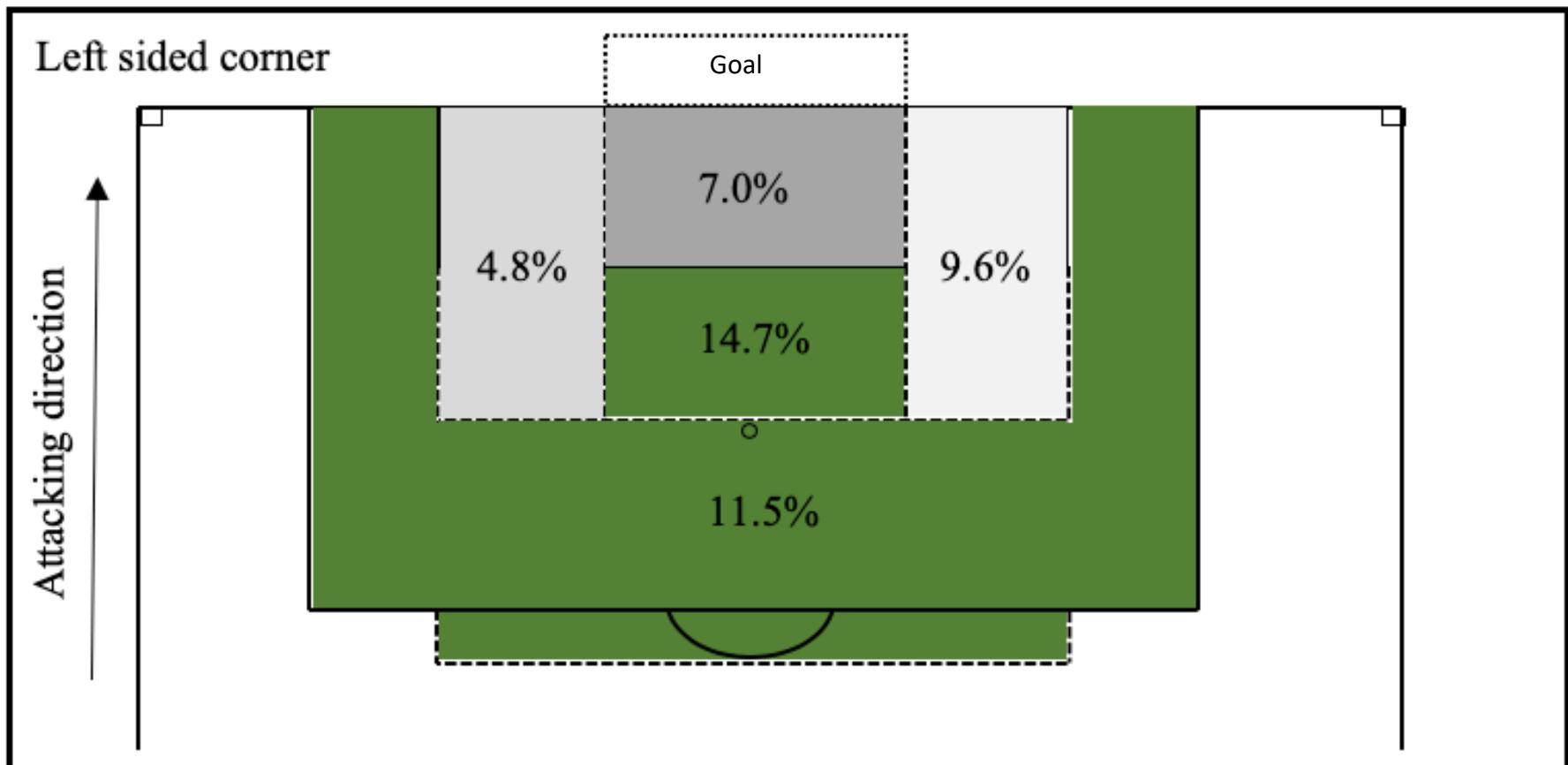
Results: Goals

- **38 goals** scored (13.5% of the total 282 goals scored)
- **4.6%** of corners taken resulted in a goal
- Delivery Type had **No Effect** on outcome



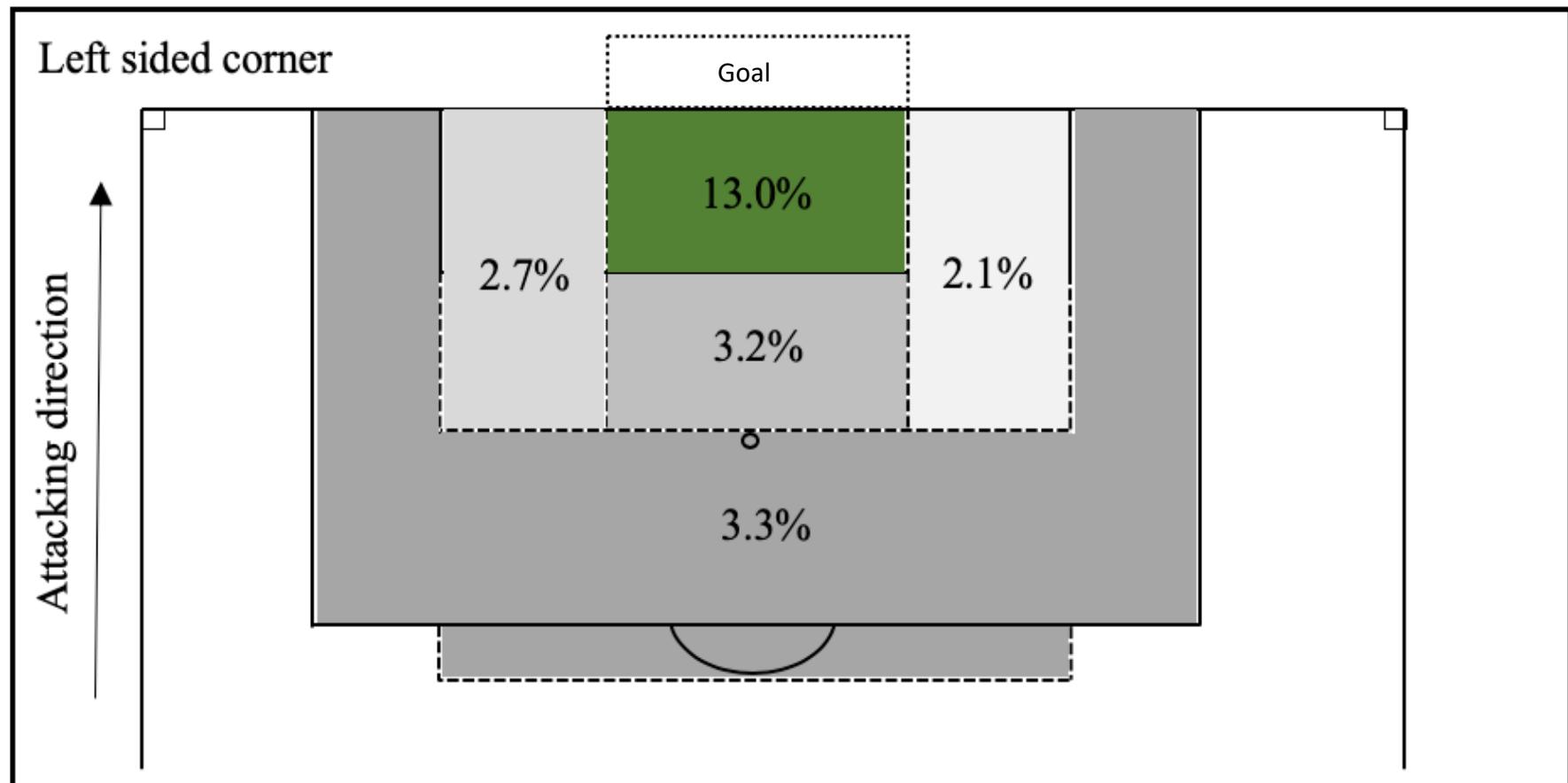
Results: Delivery Area

- Attempt On Target
- Delivery zone effected the likelihood of an attempt on target ($P = 0.018$)



Results: Delivery Area

- Goals were most likely to be scored when the ball was delivered into the **central zone** close to the goal line



Beare & Stone: Key Points

- Corners appear **relatively inefficient** (4.6%) at producing goals in the **women's game**
- However, this is approximately **double that of** efficiency values reported in the **men's game** (ranging from 2.1% to 2.9%)
- Type of delivery **does not** have an effect
- Increased the likelihood of **scoring a goal** from a delivery area **centrally** and **close** to the **goal line** (13.0%) with 50.0% of all goals being scored from GA2

Task: Intervention Design

- Using the findings from the study, what could an intervention focus on to improve performance?

- Using the guiding principles of NLP

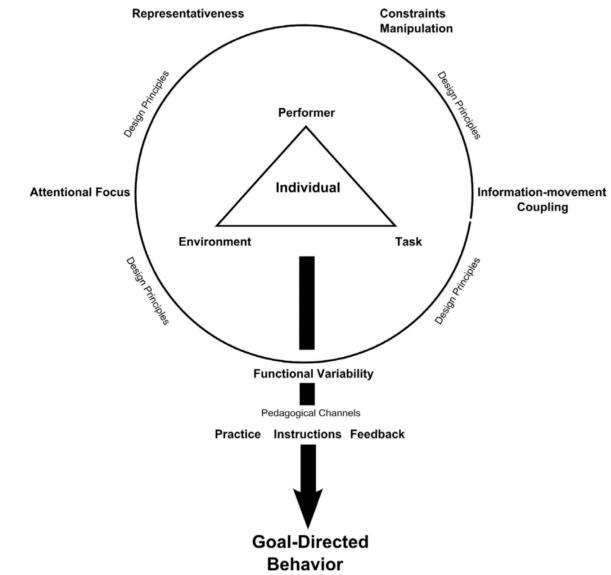


Figure 1. Conceptual framework for nonlinear pedagogy.

- What could the design of that intervention look like?
- Draw out the intervention plan

