

# **Team Cognition in Team Sports: Development of Implicit and Explicit Coordination Mechanisms through Collective Training in the Context of Youth Football**

**SGS 2018  
Magglingen**

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**9<sup>th</sup> February 2018**

# Background

shared  
knowledge

time pressure

be in sync

complexity



adaptation

timing

fluid  
action

dynamic  
situations

anticipation

no look-blind pass

verbal  
communication

# Research question

- > General problem: Many theoretical claims and assumptions without empirical foundation (e.g. Eccles & Tenenbaum, 2004; McNeese, Cooke, Fedele & Gray, 2016; Steiner, Macquet & Seiler, 2017)
- > Research question:

How does team cognition, based on shared knowledge (= implicit coordination mechanism) and based on verbal communication (= explicit coordination mechanism) develop over time and practice?

# Method

- > 40 youth football players (u18/u21) of a Super League Club
- > Mean age: 17.5 years old (Sd: 1.1)
- > Mean club training age: 11.4 years (Sd: 1.6)

## Study design

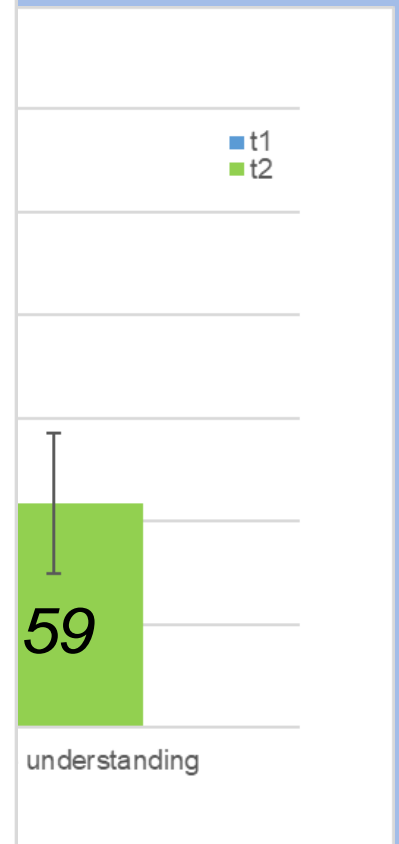
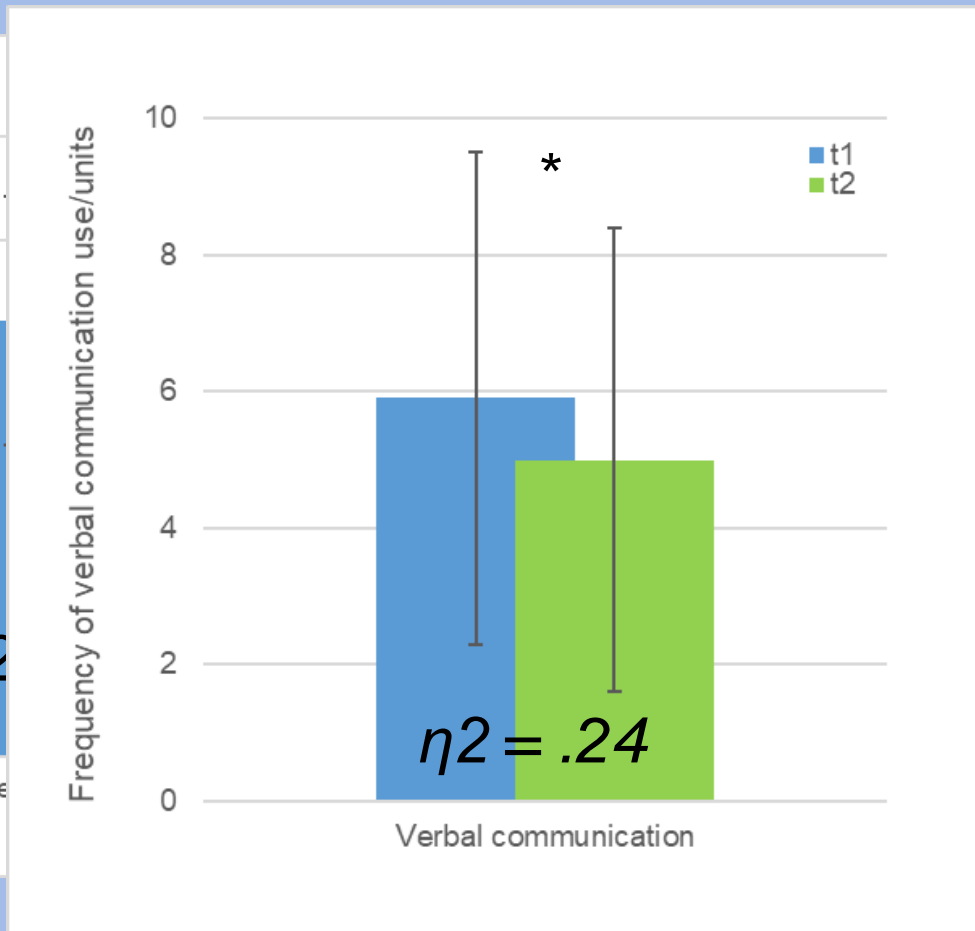
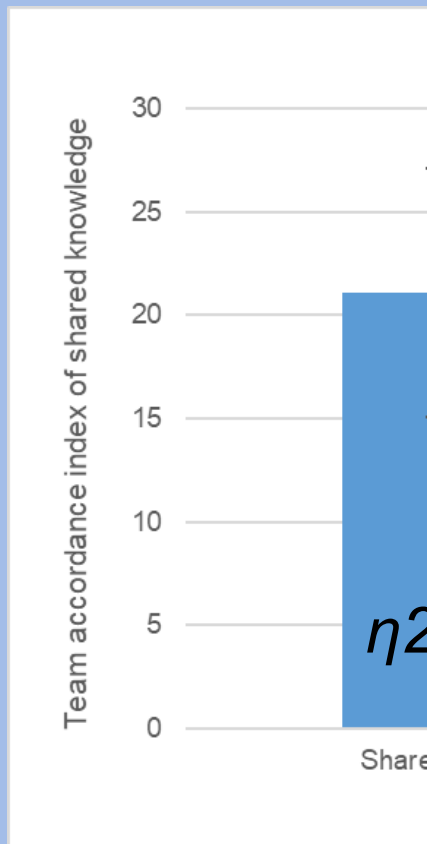
t1	<b>Training phase</b>
t2	<b>Evaluations of own and teammate's actions</b>
t3	<b>Testing phase (3 runs)</b>
t4	<b>Repetition of t2</b>
t5	<b>Testing phase (3 runs)</b>

## Team task (self-designed)



# Results

> ANOVA repeated. measures



\* Sig. on p-level of 5%

# Discussion

- > Due to practice together, shared knowledge becomes more similar over time (empirically «proven»)
- > Due to practice together, verbal communication reduces over time
- > Because of a missing relation between shared knowledge and verbal communication, the reduction of verbal communication use is not explained by a higher shared knowledge state
  - Two separate mechanisms to coordinate team actions

# References

- Eccles, D. W., & Tenenbaum, G. (2004). Why an expert team is more than a team of experts: A social-cognitive conceptualization of team coordination and communication in sport. *Journal of Sport & Exercise Psychology, 26*, 542-560.
- McNeese, N., Cooke, N. J., Fedele, M., & Gray, R. (2016). Perspectives on team cognition and team sports. In M. Raab, P. Wylleman, R. Seiler, A.-M. Elbe & A. Hatzigeorgiadis (Eds.), *Sport and Exercise Psychology Reserach: From Theory to Practice* (pp. 123-141). London: Elsevier.
- Steiner, S., Macquet, A.-C., & Seiler, R. (2017). An integrative perspective on interpersonal coordination in interactive team sports. *Frontiers in Psychology, 8*, 1-12.