

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

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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

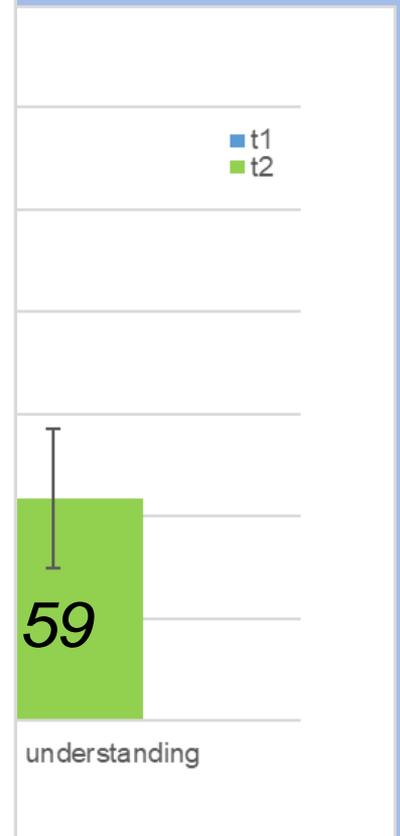
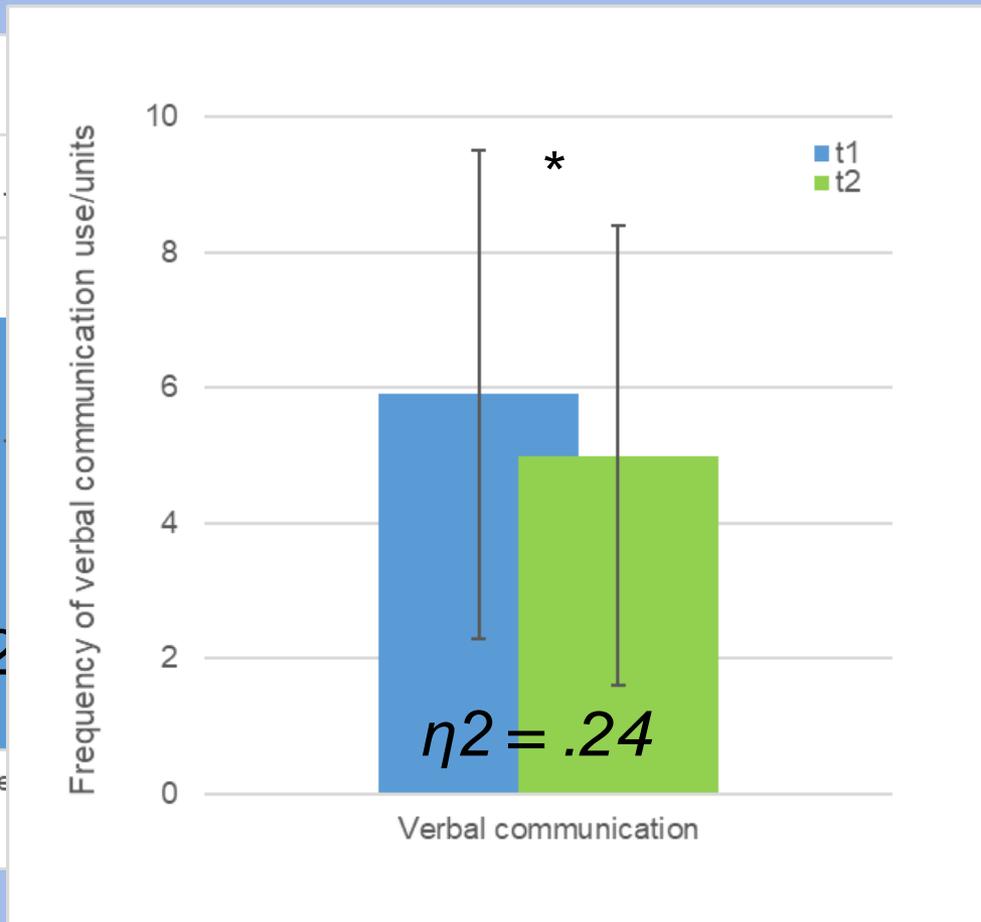
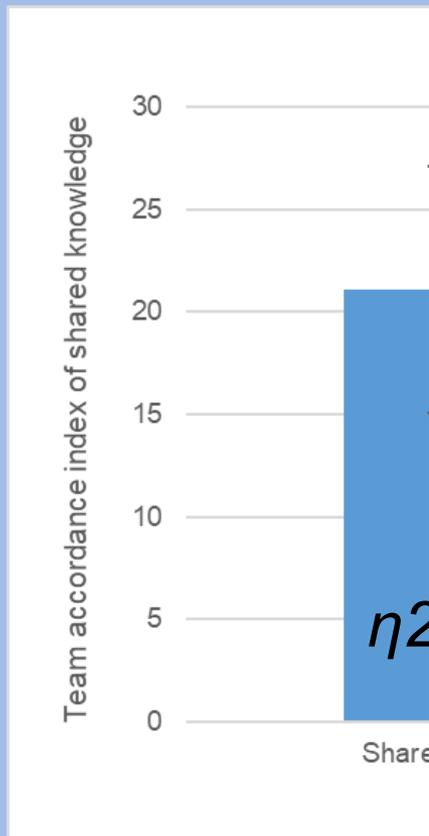
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|----|--|
| t1 | Training phase |
| t2 | Evaluations of own and teammate's actions |
| t3 | Testing phase (3 runs) |
| t4 | Repetition of t2 |
| t5 | Testing phase (3 runs) |

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.