



SEMINÁRIO

Expertise: commonalities in individual and team performance

28 e 29 de maio de 2019

U LISBOA | UNIVERSIDADE DE LISBOA

f MH FACULDADE DE MOTRICIDADE HUMANA

SEMINÁRIO

Expertise: commonalities in individual and team performance

28 e 29 de maio de 2019

28 de MAIO

Salão Nobre da FMH

Entrada livre sujeita à lotação da sala e mediante inscrição em formsp.fmh.ulisboa.pt/expertise-2019

Contacto Cláudia Pinho: claudia@fmh.ulisboa.pt

8h30 - 9h00

Abertura

9h00 - 11h00

Individual Expertise

Duarte Araújo (FMH UL)

Principles underlying the development of expertise: affordances and self-organization

Patrícia Coutinho (FADE UP)

Many roads lead to Rome: The long-term development of Portuguese volleyball players

Zach Hambrick (Department of Psychology, Michigan State University)

Beyond Born Versus Made: A New Look at Expertise

- Comments (Maria João Valamatos, FMH UL):
José Uva (Patrícia Mamona's coach);
Patrícia Mamona (Triple Jump European Champion 2016)

- Discussion (Anna Volossovitch, FMH UL)

INTERVALO

30 min.

29 de MAIO

Sala 1L

9h30 - 12h30

Cognitive Enhancement

Zach Hambrick (Department of Psychology, Michigan State University)

"Brain Training: Does it Work?"

Agostinho Rosa (IST-UL)

Neurofeedback Training for Performance Enhancement: Challenges and Perspectives

Duarte Araújo (FMH-UL)

The strict coupling of cognition and action is sport performance

- Discussion (Paulo Armada, FMH-UL)

11h30 - 13h30

Team Expertise

Luis Curral (Faculdade de Psicologia UL)

Leadership as an emergent property of teams as complex adaptive systems

Ana Margarida Passos (ISCTE IUL)

Making the most of expert teams

Miguel Pereira Lopes (ISCSP UL)

Work as a Calling for Leadership Talent

Hugo Sarmento (FCDEF UC)

An expert football team is more than a team of experts.

Comments (Fernando Gomes, FMH UL):

Hugo Canela (SCP Handball coach);

Carlos Carneiro (SCP handball player, team captain)

Discussion (João Pina, ISCTE IUL)

13h30

Closure

(Seminário integrado nas Conferências do Curso de Doutoramento em Motricidade Humana, especialidade em Treino Desportivo)

Expertise: commonalities in individual and team performance

Sobre o seminário

A perícia, enquanto capacidade para desempenhar uma atividade específica, é um tema central no desporto. As ciências do desporto tem-se focado maioritariamente nos atletas, ou naqueles que o possam vir a ser – os talentos, mas na última década, a ciência tem chamado a atenção para a perícia das equipas.

Neste seminário serão abordadas a perícia individual e a das equipas. Investigadores internacionais, que têm estudado o tema dentro e fora do desporto, trazem-nos os conhecimentos mais atuais. Dicotomias muito enraizadas, tais como Genética (capacidades inatas) vs. Treino (prática deliberada), devem ser ultrapassadas, para um entendimento mais transacional e profícuo do desempenho humano.

A contribuir para esta discussão, o seminário contará com a visão de atletas como Patrícia Mamona (Atletismo) e treinadores como Hugo Canela (Andebol).

Objectivos

- Discutir os conhecimentos mais recentes sobre Performance e Perícia..
- Apresentar uma visão multidisciplinar sobre Performance e Perícia.
- Aplicações ao Desporto.

Público a que se dirige

Estudantes, investigadores e profissionais de Treino Desportivo, ou atividades ligadas à melhoria da performance.

Duração

5 horas no dia 28
3 horas no dia 29

Local

Salão Nobre no dia 28
Sala 1 no dia 29

Principles underlying the development of expertise: affordances and self-regulation

Araújo, D.

CIPER, Faculdade de Motricidade Humana, Laboratório de Perícia no Desporto,
Universidade de Lisboa, Lisboa, Portugal

A major idea from James Gibson (1979) was that the environment is perceived in behavioral terms, i.e., affordances, defined as possibilities for action offered by the environment. Gibson argued that affordances are goal-relevant descriptions of the environment, and perceiving an affordance is to perceive how one can act in a particular set of performance conditions. Goal-directed behaviors are operationalized as emergent states produced by self-organizing processes, resulting from the continuous interplay of an individual and a performance environment. Specific action capabilities (or skills) attune performers to some affordances and not to others.

Following this reasoning, the ecological dynamics approach has elaborated a three-stage model of expertise development: (i) search, (ii) discover and stabilize, and (iii) exploit. The core issue for the development of expertise is a constrained type of variability considered at the level of the performer-environment system, as captured by affordances.

Many roads lead to Rome: The long-term development of Portuguese volleyball players

Coutinho, P.

Centre for Research, Education, Innovation and Intervention in Sport (CIFIID), Faculty of Sport, University of Porto, Portugal

The question of which long-term developmental processes lead to outstanding performance in sport has been an issue of debate in the literature for many years. Particularly, the quantity and type of sporting activities undertaken in the course of the athletic career are considered core factors in developing skill and achieving high levels of performance in sport. Despite extensive research through the last ~25 years, there is still considerable inconsistency in the state of empirical investigation concerning to the roles of quantity, variability and specialization of sport-specific and non-specific practice and play during different periods of the athletic career. This presentation will explore the case of long-term development of Portuguese volleyball players. More specifically, the sport participation history of these players will be discussed, with a particular emphasis in the volume of organized practice/training and non-organized sporting leisure play undertaken by players from different levels of performance.

Beyond Born Versus Made: A New Look at Expertise

Hambrick, Z.

Department of Psychology, Michigan State University, USA

Training is necessary to reach an expert level of skill in any complex domain. No one reaches the Olympics or becomes an internationally-renowned musician without a great deal of training. At the same time, training is insufficient to explain individual differences in expertise. In fact, in meta-analyses, my colleagues have shown that training history explains less than half of the reliable variance in expertise. Using a behavioral-genetic approach, we have further shown that the propensity to practice is substantially heritable. An instance of *gene-environment correlation*, this indicates that a person's genetic makeup influences their propensity to practice. In light of this evidence, my colleagues and I are developing multifactorial models of expertise that take into account all potentially relevant factors. This work is helping to move research on expertise beyond an anachronistic "nature vs. nurture" perspective, and to provide a scientific foundation for interventions to accelerate the acquisition of expertise.

Leadership as an Emergent Property of Teams as Complex Adaptive Systems

Curral, L.¹, Marques-Quinteiro, P.^{2*}, Gomes, C.³, Lind, P. G.⁴

¹ Faculdade de Psicologia, Universidade de Lisboa, Lisboa, Portugal; ² ISPA-Instituto Universitário, Lisboa, Portugal; ³ Instituto Superior de Ciências Sociais e Políticas, Universidade de Lisboa, Lisboa, Portugal; ⁴ Oslo Metropolitan University, Oslo, Norway.

* Presenting author

Building on the theory of teams as complex adaptive systems and the complexity leadership theory, this research tests the general hypothesis that the performance of leadership behaviors that enable information flow within teams across multiple tasks promotes greater efficiency in work groups. Participants were 40 groups of five participants each who had to complete four decision-making tasks using the city simulation game SimCity4. Before engaging in the four decision-making tasks, participants received information regarding what sort of leadership behaviors were more adequate to help them perform better. Results suggest that if complexity leadership theory is applied, groups can achieve higher efficiency over time, when compared with other groups where complexity leadership is not applied. This study goes beyond traditional views of leadership as a centralized form of control, and presents new evidence suggesting that leadership is a collective and emergent phenomenon, anchored in simple rules of behavior.

Making the most of expert teams

Passos, A. M.

Business Research Unit (BRU-IUL), ISCTE – Instituto Universitário de Lisboa, Lisboa, Portugal

In the last years there have been an enormous advance in the study of teams. However, most of the literature often focus on general organizational teams and not on expert teams. In this presentation, we define expert teams “as interdependent team members, each of whom possesses unique and expert-level knowledge, skills, and experience related to task performance (...) producing sustainable and repeatable team functioning (...) near optimal levels of performance (Salas et al, 2006, p. 440). We use recent advancements in team literature to propose four main drivers of expert teams effectiveness: a) team learning and adaptation; b) team shared cognition (e.g., team mental models); c) team leadership; and e) team affective states (e.g., psychological safety). We discuss the implications for research and practice.

Work as a Calling for Leadership Talent

Lopes, M. P.

CAPP – Centro de Administração e Políticas Públicas, ISCSP - Universidade de Lisboa,
Lisboa, Portugal

Seeing one's work as a calling (not only as a job or a career) has been found to relate positively with job performance. Recent works have found unpredictable relationships between different types of leadership and a worker's sense of calling (Esteves, Lopes, Geremias & Palma, 2018). In this communication, I will introduce the construct of "work as a calling" and outline some hypotheses about the possible usefulness of this construct to the sports management literature, particularly to sports team leaders.

References:

Esteves, T., Lopes, M.P., Geremias, R.L., & Palma, P.J.P. (2018). Calling for leadership: leadership relation with worker's sense of calling. *Leadership & Organization Development Journal*, 39(2), 248-260.

An Expert Football Team is More Than a Team of Experts

Sarmiento, H.^{1,2}, Araújo, D.^{2,3}

¹CIDAF, Faculdade de Ciências do Desporto e Educação Física da Universidade de Coimbra; ²Laboratório de Perícia no Desporto, Faculdade de Motricidade Humana, Universidade de Lisboa; ³CIPER.

The so-called “Gold Generation” won two under-20 world championships (1989, Riyadh and, 1991, Lisbon), and was one of the most successful Portuguese national teams. Under the leadership of coach Carlos Queiroz, players like Figo, Rui Costa, Paulo Sousa and Fernando Couto became world champions. Nevertheless, a team of superstars isn’t necessarily a super team.

In this sense, through a mixed approach (qualitative/quantitative), we sought to understand the processes underlying the creation and maintenance of these two expert teams.

The bioecological approach to the development process of the "Gold Generation" allowed establishing the "Gold Generation Development Model". The results were discussed at a macro and micro level, describing: 1) the factors that have impact on the effectiveness of team training; 3) the tools and strategies used to assist the creation, implementation and evaluation of an effective team training.

Brain Training: Does it Work?

Hambrick, Z.

Department of Psychology, Michigan State University, USA

Psychologists have been interested in devising ways to increase intelligence for over a century. Alfred Binet, who developed the first standardized test of intelligence, described a system of "mental orthopedics" for enhancing cognition. More recently, there has been tremendous interest in "brain training." The premise of this approach, as marketed by companies such as Lumosity, is that giving people training in cognitive tasks targeting functions such as attention and reasoning transfers to real-world tasks. If this were true, you would be well-advised to skip my lecture and spend an hour on brain training whilst lounging on the beach. However, come to my talk, because it does not appear to be true. More than a decade of research (including some from my lab) has shown what we already knew: Cognitive training has narrow benefits. I discuss avenues for research on cognitive enhancement that may hold greater promise than brain training.

Neurofeedback Training for Performance Enhancement: Challenges and Perspectives

Da Rosa, A.

LaSEEB-ISR-Departamento de Bioengenharia, IST, Universidade de Lisboa, Portugal

Electroencephalography opened a window on the brain enabling a glimpse on what is happening at a macroscopic level and Neurofeedback allowed us to interact and modulate in real-time with its electric and magnetic activities. Soon mapping brainwaves with cognitive functions was pursued, resulting in a large knowledge leading to therapies and intervention in many neurology related pathologies. The many empirical successes boosted its application to non-clinical areas namely for sports and performance enhancement, in spite of little grasp and understanding of the underlying working principle.

Although many issues still persists linked to learning effectiveness, dependence on the subjects control ability, physiological limits the approach boomed in the last recent years, the provision of competitive edge, the appeal of improving many cognitive functions namely attention, concentration, working memory, reaction time, anxiety control, dynamic equilibrium, creativity and so on are too important to be ignored. Practitioners are still searching for robustness and reproducibility but at the same time there are promising advances to reduce the influence of the weakest link in the chain, the subject itself.

The strict coupling of cognition and action is sport performance

Araújo, D.

CIPER, Faculdade de Motricidade Humana, Laboratório de Perícia no Desporto,
Universidade de Lisboa, Lisboa, Portugal

The recent expansion in “brain training” and “perceptual-cognitive training,” proposing to improve brain function, visual perception, and decision-making, has created significant interest in elite sports practitioners. The claims of these related “performance-enhancing industries” can be considered together as part of a process training approach proposing enhanced cognitive skills and brain capacity to support performance in everyday life activities, including sport. In this presentation, we critically evaluate the effectiveness of such training programmes in generalizing transfer to sport performance. Specifically, we consider merits of this highly specific form of training, which focuses on training of isolated processes, separately from performance behaviors and actions. A major weakness of process training methods is their focus on enhancing the performance in body “modules” (e.g., eye, brain, memory). What is lacking is evidence on how these isolated components are modified and subsequently interact with other process “modules,” which are considered to underlie sport performance.