

# ECHO-BASE: Co-creating a Conceptual Framework for Volleyball Expertise Development

DOI: <https://doi.org/10.62658/COFAC/ILIND/CIDEFES/2/2025>

Project Reference: COFAC/ILIND/CIDEFES/2/2025

Ana Paulo  
Principal Investigator

01/2026 - 12/2026  
Project Duration



Team members and host UI&D:

Ana Paulo <sup>1,2</sup>, Lúcia Gomes <sup>1,2</sup>, Carla Santos<sup>1,2</sup>, João Valente-dos-Santos <sup>1,2</sup>, Sara Pereira <sup>2, 3,4</sup>, Olivier Degrenne <sup>5, 6</sup>, João Pereira <sup>1,2</sup>, Luísa Lima <sup>1</sup>, Inês Arrais <sup>1</sup>, Maria Carlos Marques <sup>7</sup>

1 – CIDEFES, FEFC, Lusófona University

2 – CIFI2D

3 – FADEUP

4 - Universidade do Porto

5 – LIRTES

6 - Université Paris-Est Créteil Val de Marne, France

7 - Associação Nacional de Treinadores de Voleibol (ANTV)

*Abstract:*

Expertise development, regardless of the sport context, is currently acknowledged as multifactorial, process-dependent (i.e., context-; and time-dependent) and diverse. However, recent reviews on the subject highlight the overrepresentation of cross-sectional designs, individual physical factors, and male adult participants, with small sample sizes, in expertise research. Volleyball-related research aligns with this general trend. However, recent findings on national youth squad selection highlight that coach assessment is the most

relevant factor; it reflects the coach's *gut instinct* in the selection process, i.e., the aggregated capacity of the expert coach to consider a potential multitude of factors influencing current and future performance. Coaches are a key element of talent identification in sport and are often used as the *gold standard* against which scientific methods of talent identification are compared.

This project aims to establish, through participatory evidence-based research, a comprehensive volleyball expertise development framework that acknowledges diversity (e.g., sex or cultural differences). It bridges scientific evidence and expert coaches' experiential knowledge to build an applied and inclusive understanding of volleyball expertise. We will conduct in-depth semi-structured interviews with at least 20 international expert youth coaches with elite-level roles and no less than 10-year coaching experience, mostly in youth level, from at least six countries, ensuring balanced representation across gender, age, coaching experience, and cultural backgrounds. Recruitment will prioritize equitable gender balance and inclusion of coaches who have worked with both male and female teams. The framework will be co-created with expert coaches through qualitative analysis of interview data (thematic analysis) and subsequently strengthened through triangulation with scientific evidence from a systematic literature review ("Best fit" framework synthesis), ensuring that both experiential and research-based knowledge inform volleyball expertise development.

ECHO seed project will create the foundation required for a follow-on competitive European funding application (Erasmus + Sport). Achieved milestones – including a volleyball expertise development framework, established project partnerships, and demonstrated dissemination, will directly support scaling up to pan-European implementation, focusing on coach training and standardized player assessment.

Partners:



Collaboration in qualitative analysis procedures (expert validation of interview script content and COREQ implementation) and in systematic review procedures.



Collaboration in the interview script conception and pilot testing, conduction of interviews in French and collaboration in qualitative analysis procedures (content analysis and COREQ implementation).



Collaboration with expert coaches' recruitment process and with project dissemination to relevant stakeholders.

Alignment with SDGs:

The project adopts a scientifically rigorous, participatory and inclusive approach that contributes directly to the social, educational and institutional dimensions of the United Nation's sustainable development goals.

### **SDG 3 – Good Health and Well-being**

The project contributes indirectly to this goal by advocating for evidence-based, individualised and developmentally appropriate coaching practices. ECHO supports healthier sport environments for young athletes. It advocates for long-term development, estimation of potential rather than early exclusion, and

considering psychosocial and contextual factors aligning with sustainable approaches to physical activity that protect athletes' physical and mental well-being (e.g., burnout prevention, mental health protection).

#### **SDG 4 – Quality Education**

The ECHO Project focuses on improving the quality of coach education and learning environments in youth sport. By developing an evidence-based and participatory framework for volleyball expertise development, co-created with expert youth coaches and supported by a systematic review of the scientific literature, the project promotes professional training grounded in research, reflection and critical practice. The production of open-access outputs, dissemination in both scientific and grassroots contexts, and availability of materials in multiple languages (English, Portuguese, and French) contribute to equitable access to knowledge and lifelong learning opportunities.

#### **SDG 5 – Gender Equality**

ECHO addresses long-standing sex imbalances in sport science research and performance reference models, particularly in volleyball, where male adult populations have traditionally been overrepresented. Gender equality is embedded in the project's design through balanced recruitment of male and female coaches, systematic consideration of sex-specific development pathways, and attention to coaching experiences in both female and male youth teams. Furthermore, the research team itself reflects gender balance and female leadership, reinforcing equal opportunities in scientific participation, mentoring and authorship. In this way, ECHO contributes to the production of gender-sensitive knowledge and to more equitable sport systems.

#### **SDG 9 – Industry, Innovation and Infrastructure**

From an innovation and research capacity perspective, the ECHO project introduces methodological innovation by integrating participatory qualitative research with systematic evidence synthesis, strengthening the quality, transparency and applicability of research outputs (e.g., COREQ for qualitative research, PRISMA for systematic reviews). It also reinforces the institutional research capacity of CIDEFES and establishes a solid empirical and collaborative

foundation for future European funding applications, thereby contributing to more resilient and sustainable research infrastructures.

### **SDG 10 – Reduced Inequalities**

The ECHO Project explicitly addresses disparities across cultural, national and developmental contexts in international volleyball. Coaching methodologies and development pathways vary significantly between countries, often disadvantaging athletes in less established sporting systems. By incorporating perspectives from coaches working in diverse cultural and institutional environments, the ECHO framework challenges uniform, exclusionary models of expertise development. Its emphasis on contextual sensitivity and individual trajectories promotes fairer access to quality development opportunities, helping to reduce structural inequalities within youth sport.

Furthermore, an open-access publication policy and making findings available in at least three languages to coaches, federations and policymakers enhances its accessibility to an extended audience.

### **SDG 17 – Partnerships for the Goals**

The ECHO Project is built upon strong collaborations between universities, researchers, a national coaches' association, expert practitioners and international partners. The co-creation of knowledge, active engagement of stakeholders and dissemination across academic and applied settings illustrate how cross-sectoral partnerships can support the effective implementation of sustainable development objectives.

In summary, the ECHO project demonstrates a robust alignment with the 2030 Agenda by embedding sustainability, inclusion, gender equality and educational quality into sport science research and practice. Through its socially responsible and scientifically grounded approach, the project contributes not only to advancing knowledge in volleyball expertise development, but also to promoting more equitable, inclusive and sustainable youth sport systems across Europe.