



UNIVERSITY OF PREŠOV

FACULTY OF SPORTS

Department of education

**DISSERTATION THEMES TOPICS FOR DOCTORAL  
STUDIES AT THE FACULTY OF SPORTS PU IN PREŠOV  
IN THE ACADEMIC YEAR 2025/2026**

**FIELD OF STUDY: SPORT SCIENCES**  
**STUDY PROGRAMME: SPORTS EDUCOLOGY**

**Supervisor: prof. PaedDr. Jaromír Sedláček, PhD.**

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**Topic 1:** *Effectiveness of the development of selected movement abilities in the conditions of school physical and sports education*

**Annotation:** The aim of the thesis will be to validate an experimental programme aimed at the development of selected motor skills in primary and secondary school pupils. The prerequisite is the inclusion of exercises, means and methods that will respect the age, gender and other characteristics of the probands. The intention will be to reveal not only specific effective exercises, but also their volume and intensity in microcycles and mesocycles of training.

**Topic 2:** *Attitudes to the performance of physical activities as a determinant of the effectiveness of movement abilities development*

**Annotation:** The aim of this thesis will be to investigate the influence of attitudes on the performance of movement activities and consequently on the development of movement abilities. The task of the thesis will be to find out the level of probands' attitudes by questionnaire method and then to investigate the determination of the effectiveness of the experimental program on the development of movement abilities on selected groups of pupils, students or adult individuals.



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**Supervisor: prof. PaedDr. Elena Bendíková, PhD.** (external supervisor)

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**Topic :** *Diversification of the content of physical and sport education in terms of promoting postural health of pupils*

**Annotation:** The aim of the thesis focuses on diversifying the content of physical and sport education through the prism of intervention of movement programs, health-oriented exercises in relation to health-oriented fitness, which includes postural health. The addressed issues will contribute to the expansion of new and confirmation of existing knowledge in the field of Sports Educology.

**Supervisor: doc. PaedDr. Tomáš Perič, Ph.D., Assoc. Prof.**

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**Topic 1:** *Cognitive processes as a determinant of sports performance in combat sports*

**Annotation:** The aim of the dissertation will be to determine the importance of cognitive processes for sports performance in combat sports. Selected cognitive processes will be used for own research - primarily complex reaction time, tracking multiple objects, anticipation of movement, choice of solutions. The experiment would follow a group of probands at the beginning of training in the chosen combat sport, and after three years their performance in the given combat sport would be evaluated. During these three years, the group would complete a standardized training program and the level of their cognitive processes would be continuously assessed. Testing in virtual reality will be used to obtain data on the level of cognitive processes, which, thanks to its fully digital environment, allows cognitive processes to be indicated in an environment close to a real match. In order to obtain data on sports performance, motor tests and an expert assessment of the conduct of a sports fight from a tactical point of view will be used.



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#### **Topic 2: *The use of training in virtual reality for the development of cognitive processes in combat sports***

**Annotation:** The goal is to determine the impact of training intervention on selected aspects of tactical training in combat sports. From the point of view of focus, it would primarily be a complex reaction time, choosing a solution, tracking multiple objects. Three research groups would be involved in the experiment – one experimental and two control. The experimental group would complete a targeted program in virtual reality aimed at developing cognitive abilities. The first control group would undergo the same volume (as the experimental group) of theoretical training aimed at solving situations in the fight itself, the second control group would undergo training aimed at fitness (strength and endurance) development. Motor tests, expert assessment of the conduct of a sports fight from a tactical point of view will be used to collect data.

#### **Topic 3: *The use of training in virtual reality for the development of specific fitness training in combat sports***

**Annotation:** The goal is to determine the impact of training intervention on selected aspects of specific fitness training in half-time sports. From the point of view of focus, it would be primarily a specific speed strength and strength endurance training. Three research groups would be involved in the experiment – one experimental and two control. The experimental group would complete a targeted program in virtual reality focused on the development of specific speed-strength and power-endurance abilities. The first control group would undergo the same volume (as the experimental group) of training aimed at the non-specific development of speed skills, the second experimental group would undergo training aimed at the non-specific development of endurance skills. Specific motor tests, tests in virtual reality, evaluating selected motor cognitive processes will be used for data collection.



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**Topic:** *Impact of an interventional physical activity programme on the level of physical activity of fathers and daughters*

**Annotation:** In its „Global Action Plan on Physical Activity 2018–2030: more active people for a healthier world“, the World Health Organization recommends the promotion of the physical activity of the least physically active population groups identified in each country. In Slovakia, they include e.g. girls. While the current scientific evidence speaks of the limited effectiveness of several existing strategies aimed at increasing the level of their physical activity, the evidence indicates as well that it is fathers who can play an important role in supporting the physical activity of their daughters (Morgan et al. 2019). In an effort to support the physical activity of Slovak girls, the aim of the dissertation thesis will be to adapt the already proven Australian interventional physical activity program for fathers and daughters aimed at increasing the level of their physical activity to Slovak conditions and to evaluate its effectiveness.

In Prešov 26. 03. 2025

doc. PaedDr. Pavel Ružbarský, PhD., univer. prof.  
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