

Introduction

The *Research Methodology* course is considered one of the most fundamental and essential modules for first-year Bachelor's students specializing in Physical Education and Sports Sciences. It serves as the cornerstone of their academic and scientific training, providing the foundational knowledge and methodological framework upon which rigorous scientific work is built in advanced academic stages. Methodology is not merely a tool for organizing research steps—it is a philosophy of thinking and a scientific approach that endows students with analytical, critical, and creative skills.

In an era marked by rapid educational and athletic transformations, and with the growing complexity of scientific and technological challenges, there is a pressing need to train researchers capable of engaging scientifically with issues related to the field of physical activity and sports sciences. This starts with a sound understanding of the logic, principles, and tools of scientific inquiry. The Research Methodology course addresses this need by equipping students with essential concepts such as: research problems, hypotheses, variables, methodological design, sampling, data collection instruments, statistical analysis, and other foundational elements required for credible and ethical scientific work. The course helps students comprehend the philosophical and scientific dimensions of research while introducing them to various types of research—quantitative, qualitative, and mixed-method approaches—as well as methodological designs such as descriptive, experimental, historical, and comparative methods. Special attention is given to research in the domain of physical education and sports, considering its unique challenges in data collection, field analysis, and the measurement of physical, cognitive, and psychological performance.

This module also encourages students to adopt structured scientific thinking and avoid randomness in their analytical processes. It fosters initiative in research and enhances the ability to bridge theoretical knowledge with practical, field-based realities. Scientific research is not merely an academic exercise; it is a tool for transforming reality, improving educational and athletic practices, and promoting excellence in schools and sports institutions.

On a practical level, the course offers students the opportunity to engage in the preparation of small-scale research projects. These projects involve formulating real-life problems drawn from their academic or field environment, and proposing solutions based on solid theoretical frameworks and proper methodology. This practice aims to prepare them for future research endeavors, particularly the Bachelor's thesis in the final years of study, in accordance with internationally recognized scientific and ethical standards.

A student who masters the fundamentals of scientific research from the very first year is better equipped to face academic and professional challenges, and is more capable of contributing to the advancement of knowledge in the field of physical

education and sports—whether as a practitioner, academic researcher, or trainer in educational and sports institutions.

Therefore, teaching the *Research Methodology* course is not an end in itself, but a gateway to developing future sports researchers—students who are proficient in analytical tools, possess a critical mindset, and are driven by the ambition to improve the educational and sports environment in their communities through the production of rigorous and impactful scientific knowledge.

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