Practical Assignment (Case Study) 2

Analysis of the Training Process and Development of an Individual Mini-Research Model

Case Descriptions

1. Change in Speed Endurance in 15–16-Year-Old Football Players
2. The coach of a school football team notices that players start the match well, but their movement intensity drops sharply by the 20th–25th minute. At the same time, heart rate indicators vary even among players with similar fitness levels. It is necessary to determine whether this is related to insufficient speed endurance, inadequate recovery, or improper warm-up structure.
3. Decline in Jumping Technique in Female Volleyball Players
   In a girls' volleyball team (aged 14–15), the coach observes a decrease in jump height and deviations in attacking technique over the last two weeks. The team trains in the evening after classes. There is a suspicion of cumulative fatigue, low strength preparedness, or psychological tension before competitions.
4. Influence of Digital Training Platforms on Students' Motivation
   A first-year student group started using a mobile app to track physical activity. During the first days, all students completed tasks actively, but after two weeks, activity levels dropped by almost half. The instructor wants to examine whether this is due to low interface usability, insufficient intrinsic motivation, lack of feedback, or poorly selected tasks.
5. Changes in Reaction and Attention During Basketball Play
   During a scrimmage, the coach notices that in the last quarter players make decisions slower, struggle with "2 vs 1" situations, and make more passing errors. There is an assumption that cognitive decline is associated with fatigue, insufficient development of specific coordination, or an inappropriate training tempo.
6. Uneven Progress in Sprinters' Training
   In a group of 16–17-year-old sprinters, two athletes show significant improvements in speed, while the other four remain at the same level despite identical training. The coach suspects differences in strength levels, running technique, sleep duration, nutrition, or individual response to training load. The task is to define the key factors influencing the different rates of progress.
7. Decrease in Passing Accuracy in Handball Players
   In a school handball group, the coach observes that several players dramatically reduce passing accuracy at the end of training sessions. He assumes this is due to fatigue and improper load distribution. A scientifically grounded approach is needed to study this phenomenon.

Tasks

1. Formulate the research problem based on the selected case.
2. Identify the object, subject, aim, and hypothesis of the research.
3. Select appropriate methods: pedagogical observations, video analysis, accuracy tests, fatigue assessment methods, statistical procedures.
4. Propose a mini-experiment design (number of participants, duration, instruments, procedure).
5. Describe what data must be collected and how it should be analyzed.
6. Formulate the expected outcomes and their practical significance for the coach.
7. Prepare a short written report or presentation that reflects the full logic of the study following the structure: problem – aim – tasks – methods – organization – expected results.

Format of Submission

Written case study (1–2 pages) or presentation (6–8 slides).

If you want, I can also prepare an English template for the students' report or slides.