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УШИНСЬКОГО»

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методичні рекомендації до практичних занять з дисципліни
« Наукова комунікація іноземною мовою»
для здобувачів другого (магістерського) рівня вищої освіти
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Ірхіна Ю.В.

Методичні рекомендації до практичних занять з дисципліни «Наукова комунікація іноземною мовою» для здобувачів другого (магістерського) рівня вищої освіти спеціальності А7 Фізична культура і спорт. Одеса. 2025. 33 с.

Методичні рекомендації містять необхідну інформацію щодо мети та змісту практичних занять, методичного забезпечення основних форм контролю, результативності виконання практичних завдань, а також завдання для самостійної роботи здобувачів. Посібник включає добірку текстів і вправ, що спрямовані на вивчення основ наукової комунікації в галузі фізичної культури та спорту, написання фахових наукових статей та дослідницьких звітів, презентації наукових результатів, а також етичних аспектів професійної комунікації. Методичні рекомендації забезпечують знання та навички, необхідні для ефективної комунікації в науковому та професійному середовищі, включаючи використання статистичних даних, публікацію досліджень у міжнародних журналах та критичний аналіз наукових джерел.

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Вступ

Методичні рекомендації відповідають програмі курсу «Наукова комунікація іноземною мовою». Матеріал призначено для здобувачів другого (магістерського) рівня вищої освіти спеціальності А7 Фізична культура і спорт, а також для всіх фахівців, які прагнуть професійної діяльності у сфері наукової комунікації іноземною мовою; здійснення комунікацій у фахових дискусіях іноземною мовою; творення цілісних монологічних і діалогічних усних та писемних дискурсів англійською мовою відповідно до комунікативного наміру в межах професійного науково-педагогічного спілкування.

Цей посібник містить комплексний підхід до розробки навичок наукової комунікації, зокрема через написання наукових статей, презентацій результатів досліджень та ефективне спілкування в мультидисциплінарних командах. Він охоплює основи наукового письма, етичні аспекти досліджень, використання статистичних даних, публікацію результатів та оцінку наукових джерел.

Практичне опанування матеріалом передбачає розвиток ключових умінь у таких аспектах, як формулювання ідей, створення чітких і переконливих наукових текстів, проведення презентацій та аналізу дослідницьких результатів. Здобувачі також отримають навички ефективної комунікації в мультидисциплінарних середовищах і зможуть дотримуватися етичних стандартів у науковій діяльності.

Після опрацювання матеріалу студенти повинні володіти знаннями про сучасні методи наукової комунікації, вміти критично оцінювати наукові джерела та ефективно представляти результати своїх досліджень. Матеріали методичних рекомендацій сприятимуть формуванню високих стандартів наукової комунікації і можуть бути використані як під час аудиторних занять, так і для самостійної роботи магістрів фізичної культури та спорту.

Unit 1: The Evolution of Scientific Communication in Physical Training and Sport

Text 1: The Historical Development of Scientific Communication in Physical Training and Sport

The field of physical training and sport has a long and dynamic history that reflects the development of human knowledge about the body, movement, and performance. In ancient civilizations such as Greece, Rome, and China, physical training was closely connected with military preparation, health, and education. Greek philosophers and physicians, including Hippocrates and Galen, explored the relationship between physical activity, health, and human physiology, establishing early scientific ideas about training and physical development.

During the 19th century, the emergence of physiology, biomechanics, and pedagogy significantly influenced the scientific study of physical training and sport. Researchers began to apply systematic observation and experimentation to understand physical performance, endurance, and motor skills. The development of physical education systems in Europe contributed to the formalization of scientific communication through academic publications, instructional manuals, and institutional training programs.

The 20th century marked the recognition of physical training and sport as independent scientific fields. The establishment of professional associations, international sport organizations, and specialized journals facilitated the dissemination of research findings. Advances in sports medicine, exercise physiology, and psychology promoted evidence-based approaches to training and athletic performance. Today, scientific communication in physical training and sport involves publishing research in peer-reviewed journals, presenting studies at international conferences, and using digital platforms to share knowledge globally. This continuous evolution demonstrates the field's commitment to scientific progress, innovation, and professional development.

Questions:

1. What ancient civilizations contributed to early ideas about physical training and sport?
2. Which ancient scholars influenced the understanding of physical activity and health?
3. How did 19th-century scientific disciplines affect the development of sport science?
4. What role did physical education systems play in the evolution of scientific communication in sport?
5. Why is the 20th century considered a key period in the development of sport science?
6. What are the main areas of research in modern physical training and sport?
7. How do professional organizations contribute to scientific communication in sport?
8. What modern methods are used to disseminate scientific knowledge in sport science?
9. Why is evidence-based practice important in physical training and sport?
10. How has digitalization changed scientific communication in the field of sport?

Discussion Topics:

1. **Historical Foundations of Sport Science:** Discuss the influence of ancient and early scientific ideas on modern physical training and sport.
2. **The Role of Science in Physical Education:** Analyze how scientific research has shaped contemporary training methods and educational practices.
3. **Evidence-Based Approaches in Sport:** Examine the importance of scientific evidence in improving athletic performance and health outcomes.
4. **Scientific Communication in the Digital Age:** Explore how digital platforms and online journals have transformed the sharing of sport-related research.

5. Future Directions of Scientific Communication in Sport: Discuss possible developments in research dissemination and international collaboration in physical training and sport.

Unit 2: Effective Writing for Research Papers in Physical Training and Sport

Text 2: Writing a Research Paper in the Field of Physical Training and Sport

Writing a research paper in the field of physical training and sport is a fundamental component of academic and professional development. Scientific writing allows researchers, coaches, and educators to present empirical findings, theoretical analyses, and practical recommendations in a clear and structured manner. Effective research papers contribute to the advancement of sport science by ensuring that knowledge is systematically documented and accessible to the academic community.

A well-structured research paper typically includes an introduction, literature review, methodology, results, discussion, and conclusion. In physical training and sport research, the introduction defines the relevance of the topic, such as athletic performance, injury prevention, or physical education methods. The literature review summarizes previous studies, highlighting current trends and research gaps. The methodology section describes research design, participants, instruments, and procedures, ensuring transparency and reproducibility of results.

Clarity, precision, and objectivity are essential features of scientific writing in sport sciences. Authors must use appropriate terminology, present data accurately, and support arguments with evidence-based references. The results section focuses on factual findings, often supported by statistical analysis, while the discussion interprets these results in relation to existing research. Today, effective research writing in physical training and sport also requires adherence to ethical standards, academic integrity, and international publication guidelines, reflecting the growing global nature of scientific communication.

Questions:

1. Why is scientific writing important in the field of physical training and sport?
2. What are the main structural components of a research paper?
3. What role does the literature review play in sport science research?
4. Why is methodological transparency essential in research papers?
5. How should data be presented in the results section?
6. What is the purpose of the discussion section in a research paper?
7. Why is clarity and precision crucial in scientific writing?
8. How does ethical responsibility influence academic writing in sport science?
9. What challenges may researchers face when writing sport-related research papers?
10. How does effective writing contribute to the development of sport science?

Discussion Topics:

1. **Academic Writing in Sport Sciences:** Discuss the role of scientific writing in sharing research findings within the professional community.
2. **Structure and Organization of Research Papers:** Analyze why a clear structure is essential for effective scientific communication.
3. **Evidence-Based Writing in Physical Training and Sport:** Examine how empirical data and references strengthen research papers.
4. **Ethics and Integrity in Scientific Writing:** Explore the importance of avoiding plagiarism and following ethical standards in sport research.
5. **Improving Writing Skills for Sport Researchers:** Discuss strategies for developing effective academic writing skills in the field of physical training and sport.

Unit 3: Effective Oral Presentations in Physical Training and Sport

Text 3: Delivering an Effective Oral Presentation in Sport Sciences

Effective oral presentations play a crucial role in the dissemination of scientific knowledge in the field of physical training and sport. Researchers, coaches, and educators regularly present research findings at conferences, seminars, and professional meetings. The ability to communicate ideas clearly and confidently enhances the impact of research and supports professional dialogue within the sport science community.

A successful oral presentation in sport sciences requires careful planning and clear structure. Typically, a presentation includes an introduction that outlines the topic and objectives, a main body presenting key data and arguments, and a conclusion summarizing the main findings. Visual aids such as slides, charts, and video materials are often used to support understanding, especially when presenting statistical data or movement analysis.

Communication skills are essential for engaging the audience and ensuring effective knowledge transfer. Presenters should use clear language, appropriate terminology, and logical sequencing of information. Non-verbal communication, including body language, eye contact, and voice control, also contributes to the overall effectiveness of the presentation. In modern sport sciences, oral presentations are increasingly delivered in digital and hybrid formats, requiring presenters to adapt their communication strategies to online and international audiences.

Questions:

1. Why are oral presentations important in physical training and sport?
2. What are the main components of an effective oral presentation?
3. How do visual aids enhance presentations in sport sciences?
4. Why is audience engagement important during a presentation?
5. What role does non-verbal communication play in oral presentations?
6. How should scientific data be presented orally?

7. What challenges may arise during oral presentations at scientific events?
8. How have digital technologies influenced oral presentations in sport sciences?
9. Why is clear structure essential for effective communication?
10. How can presenters improve their public speaking skills?

Discussion Topics:

1. **The Role of Oral Communication in Sport Sciences:** Discuss how oral presentations contribute to scientific exchange and professional development.
2. **Effective Presentation Techniques:** Analyze strategies for delivering clear and engaging presentations in sport-related contexts.
3. **Use of Visual and Digital Tools:** Examine the advantages and limitations of digital tools in scientific presentations.
4. **Audience Interaction in Scientific Presentations:** Explore methods for increasing audience participation and interest.
5. **Future Trends in Oral Presentations:** Discuss how technological advances may change the format and delivery of scientific presentations in physical training and sport.

Unit 4: Ethical Considerations in Scientific Research in Sport

Text 4: Ethical Standards in Research on Physical Training and Sport

Ethical considerations are a fundamental component of scientific research in the field of physical training and sport. Researchers are responsible for ensuring that their studies are conducted in accordance with ethical principles that protect participants, maintain scientific integrity, and promote trust in research outcomes. Ethical standards guide the planning, implementation, and dissemination of research in sport sciences.

One of the key ethical principles in sport research is respect for participants. This includes obtaining informed consent, ensuring confidentiality, and minimizing potential physical or psychological risks. Research involving athletes, students, or

vulnerable populations requires special attention to safety, voluntary participation, and transparency. Ethical research design also involves fairness in participant selection and responsible data collection methods.

Scientific integrity is another essential aspect of ethical research. Researchers must avoid plagiarism, data manipulation, and misrepresentation of results. Accurate reporting, honest interpretation of findings, and proper acknowledgment of sources are critical for maintaining credibility. In contemporary sport science, ethical standards also address issues related to digital data management, open access publishing, and international collaboration. Adhering to ethical principles ensures the reliability of research findings and supports the sustainable development of physical training and sport sciences.

Questions:

1. Why are ethical considerations important in scientific research in sport?
2. What ethical responsibilities do researchers have toward participants?
3. Why is informed consent essential in sport-related research?
4. How can researchers minimize risks to participants?
5. What constitutes scientific misconduct in research?
6. Why is academic integrity crucial in sport sciences?
7. How should researchers handle confidential data?
8. What ethical challenges arise in digital and international research projects?
9. How do ethical standards influence public trust in sport research?
10. What role do ethical guidelines play in the development of sport science?

Discussion Topics:

1. Ethical Principles in Sport Research: Discuss the key ethical values that guide scientific studies in physical training and sport.
2. Participant Protection and Research Responsibility: Analyze the importance of safeguarding participants' rights and well-being.

3. Academic Integrity in Sport Sciences: Examine common ethical violations and ways to prevent them.
4. Ethics in Digital Research Environments: Explore ethical issues related to data collection, storage, and online research dissemination.
5. Future Ethical Challenges in Sport Science: Discuss how emerging technologies may influence ethical standards in sport research.

Unit 5: Using Statistical Data in Sport Research

Text 5: The Role of Statistics in Physical Training and Sport Research

Statistical data play a central role in scientific research within the field of physical training and sport. Statistics provide researchers with tools to analyze performance, evaluate training programs, and interpret physiological and biomechanical indicators. The use of statistical methods ensures objectivity, accuracy, and reliability in sport science research.

In physical training and sport research, statistical analysis is applied at various stages of the research process. Descriptive statistics are used to summarize data related to athletes' performance, physical characteristics, and training outcomes. Inferential statistics allow researchers to identify relationships, differences, and trends, supporting evidence-based conclusions. Proper data analysis enables researchers to test hypotheses and assess the effectiveness of training interventions.

The correct interpretation and presentation of statistical data are essential for scientific communication. Researchers must select appropriate statistical methods, present results clearly through tables and figures, and explain findings in an accessible manner. Ethical use of statistics includes transparency in data reporting and avoidance of data manipulation. In modern sport sciences, statistical competence is increasingly important due to the growing use of digital technologies, performance tracking systems, and large datasets. Mastery of statistical methods strengthens the quality of research and supports informed decision-making in physical training and sport.

Questions:

1. Why are statistics important in physical training and sport research?
2. What types of statistical methods are commonly used in sport science?
3. How do descriptive and inferential statistics differ?
4. Why is hypothesis testing important in sport research?
5. How should statistical results be presented in research papers?
6. What ethical issues are related to the use of statistical data?
7. How do digital technologies influence statistical analysis in sport sciences?
8. What challenges do researchers face when interpreting statistical data?
9. How does statistical analysis support evidence-based practice in sport?
10. Why is statistical literacy essential for sport researchers?

Discussion Topics:

1. **The Importance of Statistics in Sport Sciences:** Discuss how statistical analysis contributes to the advancement of physical training and sport research.
2. **Data Interpretation and Research Quality:** Analyze the role of accurate data interpretation in producing reliable research outcomes.
3. **Ethical Use of Statistical Data:** Examine common ethical issues related to data analysis and reporting in sport science.
4. **Digital Technologies and Big Data in Sport:** Explore how modern technologies influence statistical research methods in physical training and sport.
5. **Developing Statistical Competence:** Discuss strategies for improving statistical skills among students and researchers in sport sciences.

Unit 6: Publishing Research in Scientific Journals on Sport Sciences

Text 6: The Process of Publishing Research in Physical Training and Sport

Publishing research in scientific journals is a key stage in the development and dissemination of knowledge in the field of physical training and sport. Academic publishing allows researchers to share findings with the international scientific community, contribute to evidence-based practice, and enhance professional credibility. Understanding the publication process is essential for students, educators, and researchers in sport sciences.

The process of publishing research typically begins with selecting an appropriate journal that matches the topic and scope of the study. Researchers must follow journal guidelines regarding structure, formatting, and citation style. After submission, manuscripts undergo peer review, during which experts evaluate the quality, originality, and methodological rigor of the research. Based on reviewers' feedback, authors may be required to revise their work before final acceptance.

Ethical responsibility and academic integrity are central to the publication process. Authors must ensure originality, proper referencing, and transparent reporting of results. In contemporary sport sciences, researchers also navigate issues related to open-access publishing, digital platforms, and international collaboration. Successful publication not only advances scientific knowledge but also supports the professional growth of specialists in physical training and sport.

Questions:

1. Why is publishing research important in sport sciences?
2. What criteria should be considered when selecting a scientific journal?
3. What is the purpose of the peer-review process?
4. How should researchers respond to reviewers' comments?
5. Why are journal guidelines important for authors?
6. What ethical responsibilities do authors have during publication?
7. How has digitalization influenced academic publishing in sport sciences?

8. What challenges may researchers face when publishing their work?
9. How does open-access publishing affect scientific communication?
10. How does publication contribute to professional development in sport sciences?

Discussion Topics:

1. **The Role of Scientific Journals in Sport Sciences:** Discuss how journals support the dissemination of research and innovation.
2. **Peer Review and Research Quality:** Analyze the importance of peer review in maintaining academic standards.
3. **Ethical Issues in Academic Publishing:** Examine common ethical challenges in the publication process.
4. **Digital Transformation of Scientific Publishing:** Explore how online platforms have changed research dissemination in physical training and sport.
5. **Strategies for Successful Publication:** Discuss practical approaches to improving publication outcomes for sport researchers.

Unit 7: Critical Analysis of Scientific Sources in Sport

Text 7: Evaluating Research Literature in Physical Training and Sport

Critical analysis of scientific sources is a fundamental skill for students, educators, and researchers in physical training and sport. Evaluating research literature allows practitioners to identify reliable evidence, make informed decisions, and apply best practices in sport science. Understanding how to assess the quality, relevance, and validity of studies ensures that interventions, training programs, and policies are based on sound scientific principles.

The process of evaluating research literature begins with identifying relevant sources that address the research question or topic. Researchers must critically examine the study design, methodology, sample size, data analysis, and reported results. Attention should be given to the credibility of the authors, the reputation of the

journal, and the consistency of findings with existing literature. Effective critical analysis also involves recognizing potential biases, limitations, and conflicts of interest.

In addition, researchers should synthesize information from multiple studies to form evidence-based conclusions. This requires comparing methodologies, assessing statistical significance, and evaluating the applicability of results to specific contexts in physical training and sport. Critical evaluation not only strengthens scientific understanding but also promotes ethical research practices, prevents the spread of misinformation, and enhances the professional competence of specialists in sport sciences.

Questions:

1. Why is critical analysis of research important in sport sciences?
2. What factors should be considered when evaluating the quality of a scientific study?
3. How can researchers identify potential biases in research literature?
4. Why is it important to consider the reputation of the journal or publisher?
5. What is the role of sample size and study design in evaluating research validity?
6. How can researchers compare and synthesize findings from multiple studies?
7. What are common limitations that should be assessed in sport science research?
8. How does critical evaluation contribute to evidence-based practice?
9. Why is ethical consideration important when reviewing research sources?
10. How does evaluating research literature support professional development in sport sciences?

Discussion Topics:

- Assessing Research Quality in Sport Sciences: Discuss the criteria for determining the reliability and validity of studies.

- **Bias and Limitations in Research:** Analyze common sources of bias and how they affect conclusions in sport research.
- **Synthesizing Evidence for Practice:** Explore strategies for integrating findings from multiple studies into practical applications.
- **Ethical and Professional Implications:** Examine the importance of ethical evaluation in reviewing scientific literature.
- **Developing Critical Thinking Skills:** Discuss methods to enhance students' and researchers' ability to critically analyze sources.

Unit 8: Future Trends in Physical Training and Sport Research

Text 8: Emerging Trends in Physical Training and Sport

Understanding emerging trends in physical training and sport is crucial for researchers, practitioners, and educators who aim to stay at the forefront of the field. The landscape of sport sciences is continuously evolving, influenced by advances in technology, new scientific discoveries, and changing societal needs. Identifying future directions helps specialists anticipate challenges, adopt innovative practices, and contribute to the development of evidence-based interventions.

Current trends include the integration of digital technologies, such as wearable devices, motion capture systems, and performance monitoring apps, which allow for precise tracking of athlete performance and health metrics. Another important trend is personalized training programs based on genetic, physiological, and psychological profiling, enabling more effective and individualized approaches to physical development. Additionally, interdisciplinary collaboration between sport scientists, nutritionists, psychologists, and medical professionals is becoming increasingly important for holistic athlete support.

Research in sport sciences is also increasingly focused on sustainability, mental health, and inclusivity. Studies explore methods to prevent injury, reduce environmental impact, and support athletes' psychological well-being. Data analytics, artificial intelligence, and machine learning are transforming the way research is

conducted, allowing for the analysis of large datasets and the identification of complex patterns in performance and recovery. Keeping up with these trends ensures that practitioners and researchers can apply the most effective, ethical, and innovative strategies in physical training and sport.

Questions:

1. Why is it important to monitor emerging trends in physical training and sport?
2. How are digital technologies shaping modern sport research and practice?
3. What role does personalized training play in improving athlete performance?
4. Why is interdisciplinary collaboration important in sport sciences?
5. How can research contribute to athlete mental health and well-being?
6. What impact does sustainability have on sport practices and research?
7. How are artificial intelligence and data analytics changing sport research?
8. What challenges might researchers face when implementing new trends?
9. How can emerging trends influence evidence-based practice in sport sciences?
10. How do future trends support professional development in physical training and sport?

Discussion Topics:

- **Digitalization and Performance Monitoring:** Explore how wearable devices and technology are transforming training and research.
- **Personalized Training and Athlete Profiling:** Discuss the benefits and challenges of individualized approaches to physical development.
- **Interdisciplinary Approaches in Sport:** Examine how collaboration among different specialists enhances athlete performance and well-being.
- **Mental Health and Inclusivity in Sport:** Analyze strategies to promote psychological resilience and inclusive practices.

- Artificial Intelligence and Big Data in Research: Discuss the potential of AI and data analytics for advancing knowledge and predicting outcomes.

Unit 9: The Role of Science in Shaping English-Language Policy in Physical Training and Sport

Text 9: English-Language Policy in Physical Training and Sport

The role of science in shaping English-language policy in physical training and sport is increasingly significant in a globalized and interconnected world. English has become the dominant language of international research, publications, conferences, and professional communication in sport sciences. Establishing clear English-language policies in academic institutions, research centers, and professional organizations ensures consistent communication, access to global knowledge, and the dissemination of local research on international platforms.

Scientific research informs English-language policy by identifying the linguistic competencies required for effective participation in the international sport community. Studies emphasize the need for proficiency in reading, writing, listening, and speaking English, particularly for accessing scholarly publications, presenting research findings, and collaborating in international projects. Policies often focus on integrating English-language training into curricula for students, coaches, and sport practitioners, combining language learning with sport-specific terminology and professional discourse.

In addition, evidence from research guides the development of assessment standards, teaching methodologies, and instructional materials. For example, studies on multilingual learning, academic writing, and professional communication highlight best practices for integrating English effectively without compromising domain-specific knowledge. Science also helps policymakers understand challenges such as linguistic barriers, cultural differences, and varying levels of English proficiency among practitioners, allowing for more equitable and efficient implementation of language policies.

Adopting research-based English-language policies enhances global collaboration, supports professional development, and strengthens the visibility and impact of sport research. By grounding language strategies in scientific evidence, institutions ensure that students, coaches, and researchers can successfully participate in the international scientific community and contribute to the advancement of physical training and sport.

Questions:

1. Why is English important in international sport research and communication?
2. How can scientific research inform English-language policy in physical training and sport?
3. What are the key competencies needed for effective English communication in sport sciences?
4. How can English-language policies be integrated into sport education curricula?
5. Why is it important to combine language learning with sport-specific terminology?
6. How can research help address linguistic barriers in sport science communication?
7. What role do assessment standards play in implementing English-language policies?
8. How does English proficiency influence global collaboration in sport research?
9. How can policymakers ensure equitable access to English-language resources?
10. How does evidence-based language policy support professional development in sport sciences?

Discussion Topics:

- Globalization and English in Sport Sciences: Explore how the dominance of English affects research, communication, and collaboration.

- Integrating English in Sport Education: Discuss strategies for combining language learning with professional training.
- Evidence-Based Policy Development: Examine how scientific research informs effective English-language policy.
- Addressing Linguistic Barriers: Analyze challenges and solutions for non-native English speakers in sport sciences.

Unit 10: Innovative Forms of Digital English-Language Scientific Interaction in Physical Training and Sport

Text 10: Forms of Interaction in Physical Training and Sport

Innovative digital forms of scientific interaction are transforming the way professionals in physical training and sport communicate, collaborate, and disseminate knowledge. The integration of digital technologies and English-language platforms allows researchers, educators, and practitioners to connect globally, share findings instantly, and participate in professional communities regardless of geographic boundaries. Understanding these forms of interaction is essential for developing professional competencies and maintaining engagement with the international sport science community.

Digital forms of interaction include online conferences, webinars, virtual workshops, and collaborative platforms for joint research projects. Social media networks, academic forums, and digital repositories provide opportunities for discussion, feedback, and dissemination of research in real time. English serves as the primary language for most of these interactions, ensuring accessibility for a global audience. Emerging technologies, such as augmented reality, virtual laboratories, and AI-driven platforms, further enhance the potential for interactive learning, experimentation, and collaboration.

Scientific interaction through digital platforms also requires new skills, including digital literacy, academic communication in English, and the ability to navigate online research databases. Researchers must be able to critically evaluate

information, contribute to discussions, and share their work effectively while adhering to ethical standards. These innovative forms of interaction foster a culture of continuous learning, enable rapid knowledge exchange, and promote evidence-based practices in physical training and sport.

Questions:

1. What are the main forms of digital scientific interaction in sport sciences?
2. How does English-language proficiency support global digital collaboration?
3. What are the benefits of online conferences, webinars, and virtual workshops?
4. How can digital platforms enhance collaborative research projects?
5. What digital skills are required for effective scientific interaction?
6. How do emerging technologies like AR, VR, and AI support scientific communication?
7. Why is critical evaluation of online research sources important?
8. How can ethical standards be maintained in digital interactions?
9. How do digital forms of interaction influence evidence-based practice in sport?
10. What role do social media and academic forums play in professional development?

Discussion Topics:

- **Digital Transformation in Sport Sciences:** Discuss how online platforms are changing research and professional communication.
- **Global Collaboration through English-Language Platforms:** Analyze the importance of English for international digital interaction.
- **Ethical Considerations in Online Scientific Communication:** Explore challenges related to privacy, plagiarism, and responsible sharing.

- **Emerging Technologies in Sport Research:** Examine how AR, VR, and AI tools can enhance learning, experimentation, and collaboration.
- **Developing Digital Competencies:** Discuss strategies for improving digital literacy and online professional engagement in sport sciences.
- **Professional Development through Language:** Discuss how English proficiency enhances career opportunities and international engagement.

Texts for self-studying

Text 1: “The Importance of Evidence-Based Practice in Sport Science”

Introduction: Evidence-based practice is a central principle in modern sport science. It ensures that training programs, rehabilitation protocols, and performance interventions are grounded in reliable scientific research rather than tradition, anecdote, or personal preference.

Integrating Research into Practice: Translating scientific findings into practical applications requires careful analysis of the literature, understanding methodological rigor, and adapting results to specific athlete populations. This integration ensures that interventions are safe, effective, and scientifically justified.

Evaluating Study Quality: Not all research is equally reliable. Coaches and practitioners must critically evaluate study design, sample size, statistical significance, and reproducibility of findings before applying them. Systematic reviews and meta-analyses provide robust summaries of evidence for informed decision-making.

Balancing Innovation and Tradition: While evidence-based practice encourages the use of validated methods, it does not exclude innovation. Sport scientists must balance proven approaches with new technologies, experimental methods, and emerging trends while continually monitoring outcomes.

Continuous Professional Development: Maintaining evidence-based practice requires lifelong learning. Attending conferences, participating in workshops, and subscribing to scientific journals help practitioners stay updated on the latest research, ensuring their methods remain effective and relevant.

Feedback and Reflection: Regular feedback from athletes, peers, and mentors is essential. Reflecting on outcomes and revising training programs based on data ensures continual improvement and professional growth.

Text 2: “Data Analysis and Interpretation in Sport Research”

Introduction: Data analysis is a critical component of scientific research in physical training and sport. Proper interpretation of data enables researchers and practitioners to draw accurate conclusions, optimize performance, and design effective interventions.

Selecting Appropriate Methods: The choice of statistical tools depends on the research question, type of data, and study design. Researchers must select methods that accurately represent relationships, differences, and trends in performance metrics.

Visualizing Data: Graphs, charts, and tables are essential for summarizing complex datasets. Visual representation not only makes results accessible but also highlights patterns, outliers, and key findings that may not be immediately evident from raw data.

Avoiding Misinterpretation: Accurate interpretation requires awareness of biases, confounding variables, and limitations of the study. Misreading results can lead to ineffective or even harmful interventions, making critical evaluation essential.

Applying Results in Practice: Data should inform training decisions, recovery protocols, and performance assessment. Evidence-based adjustments enhance athlete outcomes and provide a clear rationale for coaching decisions.

Continuous Review: Data analysis is iterative. Researchers must re-evaluate methods and results regularly to ensure accuracy and adapt to new findings or evolving methodologies.

Text 3: “Collaborative Research in Physical Training and Sport”

Introduction: Collaboration is a key driver of scientific innovation in sport sciences. Working with multidisciplinary teams allows researchers to combine expertise, share perspectives, and develop more comprehensive studies.

Interdisciplinary Collaboration: Physical training and sport research benefit from partnerships between physiologists, psychologists, nutritionists, and biomechanists. Such collaboration provides a holistic understanding of performance, health, and well-being.

International Cooperation: Global collaboration enhances the diversity and applicability of research. Sharing data, methodologies, and results across borders strengthens the reliability and relevance of scientific findings.

Communication and Coordination: Effective collaboration relies on clear communication, defined roles, and shared objectives. Digital platforms, regular meetings, and joint publications facilitate coordination among team members.

Ethical Considerations: Collaborative research requires agreement on authorship, data sharing, and ethical standards. Transparency and mutual respect are essential for maintaining integrity and trust among partners.

Building Professional Networks: Collaborative projects help researchers expand their professional networks, gain new insights, and enhance career opportunities in sport sciences.

Text 4: “The Role of Technology in Modern Sport Research”

Introduction: Technology is transforming physical training and sport research, offering new methods to measure, analyze, and enhance performance. From wearable sensors to virtual simulations, innovations improve accuracy, efficiency, and understanding of athlete development.

Performance Monitoring: Wearable devices track heart rate, movement patterns, and workload in real time. These tools provide precise data for training adjustments, injury prevention, and performance optimization.

Biomechanical Analysis: Motion capture systems, video analysis, and force platforms allow detailed study of movement mechanics. This information supports technique correction, rehabilitation, and performance enhancement.

Digital Data Management: Advanced software and cloud platforms enable efficient data storage, analysis, and sharing among researchers and coaches. Digital solutions facilitate long-term monitoring and evidence-based decision-making.

Virtual Learning and Simulation: Virtual reality and simulation tools create immersive training environments, enhancing skill acquisition, tactical understanding, and cognitive preparation for competition.

Challenges and Limitations: Technology must be used judiciously. High costs, data overload, and reliance on devices without proper interpretation can hinder rather than help scientific practice.

Text 5: “Ethical Practices in Sport Science Research”

Introduction: Ethical practices are fundamental to credible and responsible research in physical training and sport. Ensuring integrity, safety, and fairness protects participants and maintains trust in scientific findings.

Informed Consent and Participant Safety: Researchers must provide clear information about study procedures, potential risks, and expected outcomes. Participants should voluntarily consent and have the right to withdraw at any time.

Data Integrity: Accurate data collection, analysis, and reporting are essential. Fabrication, falsification, or selective reporting undermines research credibility and can have serious consequences for practice.

Confidentiality: Protecting personal information of athletes and participants is a legal and moral responsibility. Data must be anonymized and stored securely.

Conflict of Interest: Researchers must disclose financial, professional, or personal interests that could bias their work. Transparency ensures the reliability of conclusions and maintains trust in scientific research.

Promoting Fairness and Inclusivity: Ethical research considers diverse populations, avoids discrimination, and ensures that results are applicable and beneficial to all relevant groups.

Continuous Ethical Reflection: Ethical practice is ongoing. Researchers should stay informed about evolving standards, regulations, and best practices in sport science research.

Now study the following cases to develop your communicative skills:

Case Study Task 1: The Evolution of Scientific Communication: From Print to Digital Media

Case Study: A sport science department is transitioning from traditional print journals to digital publishing platforms. Faculty members want to understand how this shift affects research visibility, collaboration, and accessibility.

Scenario: The department is reviewing options to digitize past publications and integrate online platforms for new research dissemination. Administrators and researchers must evaluate benefits and challenges.

Tasks:

1. **Analysis:** Examine how digital platforms enhance accessibility, searchability, and international reach of sport science research.
2. **Challenges:** Identify potential issues such as digital literacy gaps, platform costs, and concerns about information overload.
3. **Stakeholder Impact:** Consider effects on researchers, students, institutions, and the public who rely on accessible scientific content.
4. **Best Practices:** Suggest strategies for a smooth transition, including training, archiving protocols, and platform selection.
5. **Future Outlook:** Discuss the long-term impact of digital communication on collaboration, citation rates, and the evolution of scientific discourse in sport sciences.

Case Study Task 2: Open Access Publishing in Modern Science

Case Study: A mid-sized research university considers fully adopting open-access publishing for all sport science research outputs.

Scenario: Administrators want to understand implications for visibility, funding, and academic credibility.

Tasks:

1. **Analysis:** Explore benefits like increased global visibility, higher citation rates, and broader public access to research findings.
2. **Challenges:** Assess financial costs, quality assurance, and the potential resistance from traditional publishing stakeholders.
3. **Stakeholder Impact:** Evaluate effects on faculty, students, public readership, and other research institutions.
4. **Best Practices:** Recommend strategies for a successful open-access policy, including institutional repositories and funding support.
5. **Future Outlook:** Predict how adopting open-access might influence global scientific collaboration and the university's reputation.

Case Study Task 3: Collaborative Research Networks in Sport Science

Case Study: A consortium of international universities aims to establish a collaborative digital network for sport science research.

Scenario: Researchers need to design communication protocols, shared databases, and joint publication practices.

Tasks:

1. **Analysis:** Identify advantages of global collaboration, including diverse expertise, larger datasets, and innovation potential.
2. **Challenges:** Highlight issues such as time zone differences, cultural variations, and data security.
3. **Stakeholder Impact:** Consider effects on participating researchers, institutions, and the wider scientific community.
4. **Best Practices:** Propose effective communication strategies, project management tools, and authorship agreements.
5. **Future Outlook:** Discuss how digital networks may shape international research trends and accelerate evidence-based sport science.

Case Study Task 4: Ethical Considerations in Digital Scientific Communication

Case Study: An online platform for sport science research submissions reports concerns about plagiarism, data falsification, and improper authorship.

Scenario: The platform administrators must develop policies to maintain ethical standards and ensure trust among users.

Tasks:

1. **Analysis:** Examine the importance of ethical guidelines for maintaining research integrity and credibility.
2. **Challenges:** Identify risks such as misuse of digital tools, lack of peer oversight, and global variations in ethical norms.
3. **Stakeholder Impact:** Assess consequences for researchers, institutions, students, and the public.
4. **Best Practices:** Suggest strategies like plagiarism detection software, clear authorship policies, and training programs.
5. **Future Outlook:** Explore how ethical frameworks may evolve with digital communication and affect global sport science research standards.

Case Study Task 5: Implementing Virtual Conferences in Sport Science

Case Study: A national sport science association plans to host fully virtual international conferences to enhance participation and accessibility.

Scenario: Organizers need to evaluate the effectiveness, inclusivity, and technical feasibility of digital events.

Tasks:

1. **Analysis:** Discuss benefits such as wider audience reach, reduced travel costs, and real-time networking opportunities.
2. **Challenges:** Identify potential technical difficulties, engagement issues, and differences in participant time zones.

3. **Stakeholder Impact:** Consider effects on speakers, attendees, sponsors, and the association's reputation.

4. **Best Practices:** Recommend solutions for engagement, accessibility, and content delivery, including interactive sessions and multilingual support.

5. **Future Outlook:** Predict how virtual conferences may influence international collaboration, knowledge dissemination, and professional development in sport sciences

Topics for Scientific Research

1. Evolution of Scientific Communication in Sport Sciences

- Історичний розвиток методів наукової комунікації у фізичній культурі та спорті

- Вплив цифрових технологій на поширення наукових знань

2. Impact of Open-Access Publishing on Sport Science Research

- Переваги відкритого доступу для видимості та цитованості досліджень

- Виклики та етичні аспекти переходу на open-access моделі

3. Digital Transformation in Performance Monitoring

- Використання носимих пристроїв та систем захоплення руху для оцінки спортсменів

- Наслідки цифрових технологій для точності досліджень та оптимізації тренувань

4. Evidence-Based Practice in Physical Training

- Інтеграція наукових досліджень у тренувальні та реабілітаційні програми

- Методи оцінки якості досліджень та застосування результатів на практиці

5. English-Language Policy in Sport Science Education

- Роль англійської мови у міжнародних дослідженнях та професійній комунікації

- Стратегії інтеграції англійської мови у навчальні програми для спортсменів і студентів

6. Collaborative and Interdisciplinary Research in Sport Sciences

- Переваги міжнародної та міждисциплінарної співпраці у спорті
- Виклики координації, авторства та дотримання етичних норм у спільних проєктах

7. Ethical Standards in Sport Science Research

- Забезпечення інформованої згоди, конфіденційності та цілісності даних
- Вирішення конфліктів інтересів та розвиток інклюзивного наукового середовища

8. Innovative Forms of Digital Scientific Interaction

- Віртуальні конференції, вебінари та онлайн-форуми для глобальної співпраці
- Використання ШІ, VR та інтерактивних платформ для покращення наукової комунікації

9. Critical Analysis of Research Literature in Sport Sciences

- Методи оцінки надійності, валідності та упередженості наукових досліджень
- Техніки синтезу доказів для практичного застосування та формування політик

10. Future Trends in Physical Training and Sport Research

- Нові технології та персоналізовані підходи до розвитку спортсменів
- Інтеграція психічного здоров'я, сталого розвитку та інклюзивності у майбутніх дослідженнях

TEST

1. Які фактори сприяли розвитку наукової комунікації у фізичній культурі та спорті?
 - А) Впровадження цифрових платформ
 - В) Зменшення кількості наукових конференцій
 - С) Обмежений доступ до наукових публікацій
2. Що є основним призначенням процесу рецензування наукових статей?

- А) Перевірка правильності графічного оформлення
- В) Оцінка якості і достовірності дослідження
- С) Затвердження авторських прав

3. Яка роль англійської мови у спортивній науці?

- А) Зменшення необхідності міжнародної співпраці
- В) Забезпечення глобальної доступності та спільної роботи
- С) Обмеження публікацій лише для носіїв мови

4. Що є ключовим для ефективного представлення наукових даних?

- А) Чіткість, точність та логічна структура
- В) Використання великої кількості складних термінів
- С) Обмеження графіків та таблиць

5. Які переваги відкритого доступу (open-access) для наукових публікацій у спорті?

- А) Підвищена видимість та цитованість досліджень
- В) Зменшення якості наукових статей
- С) Заборона міжнародного доступу

6. Які цифрові інструменти найчастіше використовуються для моніторингу спортсменів?

- А) Wearable devices та motion capture systems
- В) Класичні друковані журнали
- С) Паперові щоденники тренувань

7. Що передбачає принцип evidence-based practice у фізичній культурі та спорті?

- А) Використання лише традиційних методів
- В) Інтеграцію наукових доказів у практичну роботу
- С) Виключення нових технологій з тренувального процесу

8. Які навички необхідні для ефективної цифрової наукової взаємодії?

- А) Цифрова грамотність та англомовна академічна комунікація
- В) Виключно знання локальної мови
- С) Здатність друкувати документи вручну

9. Які етичні аспекти важливі у спортивних наукових дослідженнях?

- А) Інформована згода та конфіденційність даних
- В) Фальсифікація результатів для публікації
- С) Ігнорування авторських прав

10. Що є основним завданням критичного аналізу наукових джерел у спорті?

- А) Оцінка достовірності, надійності та методології досліджень
- В) Підбір найбільш популярних авторів без перевірки даних
- С) Виключно візуальна оцінка графіків та таблиць

11. Які тенденції в майбутньому вплинуть на розвиток фізичної підготовки та спорту?

- А) Персоналізовані тренувальні програми та використання ШІ
- В) Відмова від цифрових технологій
- С) Зосередження лише на традиційних видах спорту

12. Як цифрові платформи та онлайн-конференції впливають на наукову комунікацію у спорті?

- А) Забезпечують швидкий обмін знаннями та міжнародну співпрацю
- В) Ускладнюють доступ до досліджень
- С) Обмежують професійний розвиток на місцевому рівні

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Навчальне видання

Ірхіна Ю.В.

методичні рекомендації до практичних занять з дисципліни
« Наукова комунікація іноземною мовою»
для здобувачів другого (магістерського) рівня вищої освіти
А7 Фізична культура і спорт.

Методичний посібник