D053 - Introduction to Academic Writing in Sports Science

Course dates / times:

17 and 24 Oct, 14 Nov, 12 Dec. Same time: 16.50 – 19.20, A34 room 225 each time.

Goals:

To improve your knowledge of both research and academic English and to practice some academic writing and some presenting academic work in English.

Format and style of the seminars: there will be a lot of discussion and interaction – as much speaking practice as possible, writing practice, presentations etc.

Unit outline:

Seminar 1: Scientific method, academic language, database searching.

Seminar 2: Research designs and data collection.

Seminar 3: Writing a scientific abstract

Seminar 4: Data analysis and presenting data, summary.

Homework and Assessment:

Homework / assignment tasks will be set for completion by next seminar. May involve presentation back to the group, usually involve some writing and peer review.

The homework tasks are designed to consolidate the information and help achieve the goals of the course, so they are worthwhile completing properly.

Assessment: Completion and presentation of a scientific abstract on your chosen topic, from assignment work and presentations during course.

Unit 1 The Scientific Method

What is the role of research in modern sport and exercise science?

What do you think about when you hear the term "research"? ***Discuss with the group.***

How do you think research is applicable to sport and exercise environments? Why is it relevant? ***Discuss with the group.***

Discuss which of these two approaches to sport and performance is likely to work better? ***Why? Write down some reasons for your answer, then discuss with the group.***

1. Turn up on the day, try and be positive, focus hard, concentrate… and hope you will perform well and be successful…

2. Train specifically for the event, learn particular tactics and training methods to help you perform well, research the best way to train for the sport and compete against your opponents, have a more detailed game plan and approach..…or in other words, to take a more scientific approach?

There are lots of different ***definitions of research****…but which is the best? Do they have any common points?* ***Discuss with a partner, then feedback to the group.***

- Research implies *'a careful and systematic means of solving problems'* (Thomas and Nelson 2001, p.3).

- *'Research is a systematic process of discovery and advancement of human knowledge'.*

- Research – *'Any honest attempt to study a problem systematically or to add to man's knowledge of a problem may be regarded as research.'* (Theodorson and Theodorson 1969 cited in Reber 1995, p.663)

- *"The aim, as far as I can see, is the same in all sciences. Put simply and cursorily, the aim is to make known something previously unknown to human beings. It is to advance human knowledge, to make it more certain or better fitting . . . the aim is, as I have said, discovery".*
(Elias 1986, p.20) (from Okasha, S. *Research Methods for Sports Studies.* OUP, 2002.)

*But why **scientific study in sport and exercise**? Are they important enough? Surely health, education, the environment etc. are far more important?*

**** Discuss with the group.***

Why undertake research? – A summary of the different purposes of research

Think of 1 example of scientific research that falls under each of the following headings:

- To investigate some existing situation or problem.

- To provide solutions to a problem.

- To explore and analyse more general issues.

- To construct or create a new procedure or system.

- To explain a new phenomenon.

- To generate new knowledge.

……or a combination of two or more of any of the above.

Research: First steps

Every scientific enquiry begins with a question or a series of questions, which result from curiosity. Curiosity is a consequence of the interest people develop while interacting with various objects and aspects of their environment.

For example, athletes who are interested in improving their personal achievements show curiosity, which leads them to ask questions such as, "what equipment, techniques or training can I use to help me to enhance my performance?" A question such as this leads to inquiry and investigation.

The following diagram describes a typical sequence of events:

The fundamentals of research:

Leedy (1985) and Walliman (2001) note a number of characteristics of research. These include the following:

* ***Think about the statements below and discuss with the group.***

1 Research is generated by a specific research question, hypothesis or problem.

2 Research follows a specific plan or procedure – the *research process.*

3 Research aims at increasing understanding by interpreting facts and reaching conclusions based on those facts.

4 Research requires reasoned argument to support conclusions.

5 Research is reiterative – it is based on previous knowledge, which it aims to advance, but it may also develop further research questions.

Research is, therefore, more than simply searching for facts. As we suggested earlier, research is a ***systematic investigation*** to answer a question. Many people associate research simply with methods of data collection such as interviews and questionnaire surveys. Data collection is just one part of a wider process, however, and other stages are equally important.

There are five important **stages of scientific research**:

**** Work with a partner: put the following stages of research in the correct order. Discuss the importance of each stage.***

The stage of designing how to collect the data to answer the question, or the *research design*.

The reporting of the research to communicate the findings to others.

The analysis of the data – with reference to the theoretical framework adopted – to answer the question.

The researcher decides upon the research question, the aim of the research, the research objectives and the theoretical framework that underlies the research.

The actual data collection stage, where the data is collected by one or more *research methods*.

The ***research process*** is the overall process that guides a research project.

Discuss: What are the characteristics of a scientific investigation?

The scientific method is the process by which scientists, collectively and over time, attempt to construct an accurate (reliable, consistent, predictable) representation of the world. We aim through the use of standard procedures and criteria to minimize those personal or cultural influences when developing and investigating a theory.

What are the basic steps of the scientific method?

**** Complete the gaps with the group.***

1. ……... of a phenomenon or group of phenomena

2. Formulation of a …… to explain the phenomena

3. Performance of …….. of the predictions

If the experiments bear out the hypothesis it may come to be regarded as a theory or law of nature. If the experiments do not bear out the hypothesis, it must be rejected or modified.

Academic Vocabulary: What is the True Nature of Identity?

In my opinion, the very **concept** of identity, **corresponds precisely** to the **perception** and **interpretation** of it's meaning by the individual themself. It's not necessary for one to scour the research looking for irrelevant **variables** and obscure **analysis**, simply to go with one's own **gut-feeling**.

The **principle** of identity is therefore an **interpretation** of what someone believes about themselves, rather than the **acquisition** of information, **data** or estimates from formal or scientific sources….I **deduce** that I am who I think I am, a **function** of my own innate creativity, emotions, imagination and **cognitive** processes. And it is my own opinion and **estimate** that is **significant**, not **comments** or thoughts from anyone else….
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Discuss in pairs or small groups: * What's the meaning of the text?

**** What do the words in bold mean?***

Vocabulary shift – verbs.

There is a tendency in academic writing to use a single verb where possible, rather than verb + preposition or phrasal verbs. *For example:*

- People are often very short of time, therefore they must routinely **put into practice** creative solutions to solve unexpected problems.

- People are often very short of time, therefore they must routinely **implement** creative solutions to solve unexpected problems.

**** Work with a partner: look at the following sentences and replace the phrases in Italics with a verb from the list, to make the sentences more formal:***

tolerate	maintain	eliminate	determine	constitute
decrease	consider	investigate	develop	increase

Many technology manufacturers in developed countries *put up with* widespread copyright violations in less developed countries, and even offer local versions of their products.

Scientists are *looking into* a new and advanced drug delivery system that can transport and deliver a drug precisely and effectively to its site of action.

The purpose of this study is to try and *figure out* what is lacking in our current understanding of the effects of long term drug addiction on mental health and depression.

Researchers have *come up with* plug-in hybrid vehicles that can draw from two sources of energy. It is hoped these new vehicles will be much more environmentally friendly.

Rice and aquatic foods *make up* a major part of the diet of the people of the Mekong Delta, Vietnam and other parts of south-east Asia.

The use of touch screen voting systems could *get rid of* problems associated with traditional paper-based ballots, including the potential for corruption during the voting process.

Average global temperatures have *gone up* by 0.2 degrees in the past decade.

If an individual isn't able to manage to *keep up* regular exercise, it can have a serious impact on his physical fitness.

The number of people who are physically active more than five days a week in the US has *gone down* over the past twenty years.

Many governments are now *thinking about* ways they can balance their budgets, and avoid excessive spending.

(adapted from Swales and Feak, Academic Writing for Graduate Students*, 2015)*

Phrasal verbs in academic English

Although phrasal verbs occur most frequently in more informal spoken and written English, they are also not uncommon in an academic context. You will hear them used in lectures and will read them in serious journals.

Phrasal verbs often have one-word synonyms. These are usually of Latin origin and sound more formal that their phrasal verb equivalent but both are appropriate when writing or talking about academic subjects.

**** Working alone or with a partner, complete the table using synonyms from the list below:***

aim check conduct consist of constitute discuss observe present

phrasal verb	*synonym*	*example*
put forward (an idea, theory, plan, opinion)		In her latest article Kaufmann puts forward a theory which is likely to prove controversial.
carry out		I intend to carry out a series of experiments.
make up		Children under the age of 15 make up nearly half of the country´s population.
be made up of		Parliament is made up of two houses.
point out		Green points out that the increase in life expectancy has led to some economic problems.
set out		In her article Losanova sets out to prove that…
go into		In this book the author goes into the causes of the civil war in some depth.

**** Rewrite the sentences replacing the underlined word in each sentence with a phrasal verb from the table above.***

a) In his article Kingston on the American Civil War discusses the reasons why the situation developed in the way it did.

b) Please check your work again carefully before handing it in.

c) Women now constitute over half the student population in most universities in this country.

d) We conducted a series of experiments to test our hypothesis.

e) Cole presents some fascinating theories on the development of language in his latest book.

f) The psychologist observed that it was very unusual for a young child to behave in this way.

g) In this article Simpson aims to prove that the Chines reached America long before the Vikings.

*** Homework - in preparation for the next seminar:**

- Watch the videos on database searching on the IS system

https://is.muni.cz/auth/el/fsps/podzim2019/d053/um/M1_L2_final_video.mp4?lang=en

https://is.muni.cz/auth/el/fsps/podzim2019/d053/um/M1_L3_final_video.mp4?lang=en

- Use the advice given in the videos to search for 3 articles that are relevant to your research / topic of interest.

- Use the synthesis plan (see next page, also in the IS system) to process / evaluate the articles (or use other ones relevant to your research / projects).

- Prepare a short 2-3 minute presentation on your research topic, what you aim to investigate, what previous studies have found, why the research question is relevant, what your hypothesis and predictions for the study findings are.

* We will listen to and peer review the presentations at the start of the next seminar.

"SYNTHESIS PLAN" for the integration of information resources and personal intentions

Study	**Main concerns**	**Sample**	**Method**	**Main findings**	**Personal comments**
e.g. Festinger (2012)	Heart-rate during imagery	20 female athletes, age 22-35	Using computerised equipment	No changes in excitation. Changes in relaxation.	Short imagery sessions.

(Tenenbaum, G., Driscoll, M.P. (2005). *Methods of Research in sport Sciences.* Meyer & Meyer Sport.)