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**DEVELOPING ACADEMIC ENGLISH IN
SPEAKING AND WRITING**

Academic textbook

Július Rozenfeld & Slávka Tomaščíková

Košice 2021

This research was supported by the VEGA project 1/0447/20 The Global and the Local in Postmillennial Anglophone Literatures, Cultures and Media, granted by the Ministry of Education, Research and Sport of the Slovak Republic.

Developing Academic English in Speaking and Writing

Academic textbook

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The authors are responsible for the professional and linguistic aspects of this academic textbook.

Available at: www.unibook.upjs.sk

Publication date: 25.01.2021

<https://doi.org/10.33542/DAE2021-960-3>

ISBN 978-80-8152-960-3 (e-publication)

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INTRODUCTION

The project of this academic textbook is based on the call to combine the teaching methodologies of academic speaking and writing into one complex approach, a need which has been identified by both authors during more than a decade of experience with teaching courses of academic speaking and writing separately as two unrelated phenomena. For the composition of the textbook the authors have accepted and used the concept of Academic English specified by Wilson as being

often considered relatively formal complex English that conveys ideas in a precise and objective manner. It is generally acknowledged to include the essential skills of literary analysis, the observance of reference systems, the synthesis of associated scholars and the ability of critical evaluation. Essential academic vocabulary, phrases and grammatical complexity are often used traditionally in academic dialogue and text. Specifically, Academic English refers to words and practice that are not necessarily common or frequently encountered in informal conversation and circumstances.

(<https://www.academic-englishuk.com/definition-of-academic-english>)

This academic textbook is intended for university students of English philology, students of literary and cultural studies focusing on Anglophone areas, students of English translation and interpretation study programmes, but also for students who study in English and who are required to engage in scientific inquiry and document their research in Bachelor or Master theses, or in doctoral dissertations written in English.

Every chapter contains two sub-chapters: the first one is devoted to ‘Academic Speaking’ and the second one deals with aspects of ‘Academic Writing.’ Each sub-chapter contains a glossary of concepts necessary for an understanding of the theoretical and methodological foundations of the

individual themes, a theoretical background that serves as an essential reading section with an overview of the theme, a language study section with study questions and speaking or writing mechanics which allow students to develop the theme further through discussion, analysis or additional reading, and a bibliography divided into the works cited in the sub-chapter and a segment with recommendations for further reading.

The authors believe that this textbook can help university students and junior researchers on their path to achieving academic proficiency in English by providing them with relevant sources, guiding them to overcome difficulties successfully, asking them thought-provoking questions and motivating them to expand their knowledge and improve their academic skills.

The research used in this academic textbook has been partially supported by VEGA Project 1/0447/20 *The Global and the Local in Postmillennial Anglophone Literatures, Cultures and Media*, granted by the Ministry of Education, Research and Sport of the Slovak Republic.

CHAPTER 1 ACADEMIC INQUIRY

1.1 Academic speaking: Facts or opinions?

Student researchers are often required to present their thoughts in spoken form in a formal, academic setting, either in a presentation at a seminar, a talk about a project, an analysis of the results of a scientific experiment, or in defence of their theses. They must be prepared to communicate complex ideas in a clear, coherent, and scientific manner.

One important element of scientific speeches is their adherence to facts. When preparing a speech for a scientific community, it is extremely important to support our arguments with facts from reliable sources. We can find definitions and explanations of concepts in, for example, encyclopaedias, obtain statistical data from different publications or in the journals of respected agencies such as *Eurostat* or *The Federal Statistical System of the United States*, and consult serious analyses of different think tanks including the *RAND Corporation* or the *Heritage Foundation* in the USA or the *Institute for Public Affairs* in Slovakia. Scientific publications – sometimes in the form of open access journals – are further sources of reliable information in which leading scientists can publish their findings in all branches of sciences.

Glossary of concepts

FACT

An abstract concept or a piece of information that is based on truth and is verifiable.

OPINION

A set of beliefs and impressions that is not based on verifiable information but which may be rooted in prejudice.

INTERPRETATION

The action of explaining the meaning of something.

VARIABLE

An element, feature, or factor that is liable to vary or change.

LOGIC

The study of correct reasoning, especially as it involves the drawing of inferences (cf. Hintikka, 2020).

INFERENCE

A conclusion reached on the basis of evidence and reasoning.

Theoretical background

Every student researcher must bear in mind that the scientific community is not primarily interested in their *opinions* but will expect them to present arguments that are based on *facts*. Differentiating facts from opinions is by no means an easy task.

According to the online version of *Merriam-Webster's Dictionary* (2020) a fact is “something that has actual existence or is an actual occurrence or a piece of information presented as having objective reality” (<https://www.merriam-webster.com/>). The online *Oxford English Dictionary* offers three definitions of fact: “1) A thing that is known or proved to be true; 2) Information used as evidence or as part of a report or news article; 3) The truth about events as opposed to interpretation” (<https://www.oed.com/>). The definition of a *fact* is can also be described by its synonyms such as reality, actuality, certainty or truth. In summary, a fact

is a statement that can be proven to be true or false, whereas an opinion is a statement that cannot be proven true or false, but which is based on the speaker's beliefs. We should be careful here, however, since opinions can be backed up by facts and such statements may also create the impression that in an argument we are dealing with facts. This is called *informed opinion*, but, nevertheless, it is still only an opinion, not a fact! When words such as 'best, worst, always, never, all, none' or their synonyms appear in a statement, this should be a warning for the readers or listeners that they are hearing an opinion. A fact is thus an objective statement based on verifiable information and data, whereas an opinion is subjective and is as such based on a person's attitudes, hopes, beliefs, or wishes. One example of this may be the price of an item. One may say "Vanilla ice cream costs €2 in this shop", and it would be a verifiable fact. Another person can say "Vanilla ice cream is very cheap", a statement which is based on his or her perception of an acceptable price.

An important task of the academic speaker is to *interpret* facts correctly and to draw accurate conclusions from the analyses. We should not forget that facts can be interpreted in different ways, mainly when no objective measurement methods are available. One example of this could be the interpretation of statistical findings when comparing the test results of two groups of students, data which is factual and objective: one group achieving an average of 78 points and the other only 57. We could say that the professor who prepared the first group 'has done a better job', since the students in that group achieved better results, but this would still be a subjective interpretation of facts. A 'good pedagogical job' is a concept which is determined by countless variables and there is no real consensus or objective scale to determine it in all its complexity.

When speaking about statistical data, scientific speakers often use graphs to illustrate trends or summarize research results. The language used to interpret charts is highly specific and every college student should be familiar with the key expressions in this area. Before discussing them, let us have a look at the similarities and differences between a *graph*, a *chart*, and a *diagram*.

Graphs are pictorial representations of statistical data that show specific relationships between different *variables*. A graph usually – but not always – uses two axes. The horizontal axis is used to represent a group of *independent variables* and the vertical axis represents *dependent variables*. Independent variables cannot be changed by other variables and can stand alone. Examples of independent variables may include the age of participants in an experiment, their sex, or the time they spend performing a certain activity. Dependent variables, on the other hand, change in relation to other variables. Examples of dependent variables may be test scores (which depend, for example, on the time spent with preparation for the test) or the growth rate of a plant which is dependent on the quality of soil, the amount of water it receives and the number of hours of sunshine it enjoys.

The most common graph is a broken-line graph, where the independent variable is usually the factor of time. Another type, the bar-graph, can be used to illustrate numerical quantities and the relative differences between different groups – for instance, population numbers in different areas. A pie-chart is another graph that is used to express part-to-whole relationships and, in addition to depicting relative differences, it is also suitable for illustrating proportional distribution. A chart is usually a sheet which provides information in tabular form. A diagram is a graphic design that explains processes or relationships among different concepts. A diagram explains

rather than represents, whereas a graph represents data which can be used for making inferences.

Language study

Interpreting graphs is not an easy task for beginners in scientific speaking. A set of specific expressions is used to precisely describe trends and relationships between dependent and independent variables within different graphs. For the following task, draw a simple graph in which the horizontal axis represents the months between January and December in the year 2020 (independent variables) and the vertical axis represents the number of books sold in units of 5,000 (dependent variables).

1. Try to draw the original chart based on the description below.

In the year 2020, sales rocketed between January and March starting at 5,000 volumes per month and reaching almost 15,000 volumes per month by the end of March. Sales peaked in March for the first time and reached the same level by the end of November once more. On the other hand, book sales plummeted between March and May and only stabilized at the end of May at the level of a little over 6,000 volumes. During the summer months – June, July, and August – book sales fluctuated between 5,800 in June, 4,600 in July, and 5,100 volumes sold in August. Sales levelled out between August and October around 5,000 volumes. Sales started to fall at the end of October and reached the level of 4,400 volumes per month. Fortunately, by the end of October the trend changed, and the sales started to soar reaching their second maximum 15,100 in November. The trend remained positive during the following month with a slight change in book sales, which steadily decreased during the month, but did not drop under 14,300 volumes by the end of the year.

2. Study the following words and group them according to their meanings.

plummet, peak, rocket, level out, decrease, rise, increase, soar, fluctuate, drop, decline, fall.

Five verbs mean GO UP:

Three verbs mean GO UP SUDDENLY or A LOT:

Five verbs mean GO DOWN:

One verb means REACH ITS HIGHEST LEVEL:

Which verb means STAY THE SAME:

Which verb means GO UP AND DOWN:

3. Changes can be described in a more detailed way when adverbs are used to modify the meaning of verbs. Study the following adverbs and create sentences with the verbs from Exercise 2: *slightly, rapidly, moderately, slowly, steadily, dramatically, sharply, gradually.*

e.g., Sales increased sharply between January and March. There was a dramatic increase in sales between January and March.

4. Arrange the following expressions from the largest amount/volume to the smallest: *well over, just under, almost, nearly, well under, exactly, just over 10,000.*

5. Prepare a short speech of three to five minutes. Please note that an average person uses 130 words in a one-minute-long speech, and therefore your speech should be between 390 and 650 words. Your speech should follow a simple structure:

- Use an introductory sentence in which you specify the main topic and the purpose (*inform, persuade, recommend, request, or entertain*) of your speech.
- Do not forget to state your name and the reason why you have chosen your topic.
- Finally tell your audience the order in which you are going to discuss your main points.
- In the body of your speech, make your first main statement about the topic.
- Provide supporting data and descriptive or explanatory sentences to explain your statement and argument.
- Continue with your second main statement and support it with explanatory sentences in which you provide verified data.
- Add your last statement and support it with explanatory sentences and data.
- At the end of your speech, do not forget to provide a conclusion.

Sample speech:

THE ROLE OF LOGIC IN SCIENTIFIC RESEARCH

Serious scientific research must always be established on logic which underpins and supports the arguments that are based on objective data and findings collected through observation or experiments to find out the reasons behind a phenomenon. Logic, according to the Merriam-Webster dictionary, is a scientific discipline that deals with the principles and criteria of validity of inference and demonstration. Thus, it is the science of the formal principles of reasoning. In my speech I would like to explain why logic is crucial for conducting rigorous scientific research.

Primarily, logic deals with the rules of right reasoning and as such can help people to make right conclusions from premises – assumptions that something is true. The discipline of logic was first formulated several centuries ago as a branch of philosophy and its principles have found use in a wide range of sciences. Its origins go back to the first studies of the grammar of languages when the correct way of argumentation and

discussion was sought for effective reasoning in law, religion, philosophy, or science. As early as the 4th century BC, Aristotle had described two types of reasoning: deductive and inductive.

Inductive reasoning is the kind of logic which is normally used in scientific studies. In inductive reasoning, conclusions are drawn from established facts – scientific laws and relationships which have been tested and proven. Scientists try to gather all available facts about a phenomenon through observation or experiment and by analysing and synthesising these facts – based on the established rules of the given scientific branch – draw an inductive conclusion that something is true (for instance a certain microbe causes disease).

An inductive argument, however, is always open to the possibility of being falsified when new data suggest that the conclusion is not fully valid. Thus, the system of science is flexible and subject to revision. New discoveries can reform, rearrange, and even completely rewrite established paradigms. The strength of scientific research lies exactly in this process of induction and falsification.

Deductive reasoning is a type of argument which reaches a conclusion from one or more statements. A deductive argument is usually expressed in the form of syllogism, which generally consists of three parts: a major premise, a minor premise, and the conclusion. This type of syllogism is called categorical syllogism. An example of categorical syllogism is the following statement: All insects frighten me and there is an insect on the wall, therefore I am frightened.

To conclude, it must be reemphasized that serious research, in any branch of science, cannot be realized without logical argumentation and the application of laws of logical reasoning. Logic offers two major types of reasoning, deductive and inductive, of which inductive reasoning is the established method of drawing inferences in scientific research.

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1.2 Academic writing: What is research?

“Writing a thesis requires a student to organize ideas and data, to work methodically, and to build an ‘object’ that in principle will serve others. In reality, the research experience matters more than the topic.”
Umberto Eco

Research is defined by most dictionaries as systematic work undertaken to consider a particular problem using scientific methods with the goal of increasing the level of knowledge. Its most frequently used synonyms are examination, exploration, enquiry, inquiry, investigation, and study. The origins of the word lie in the French word ‘recherche’.

Oxford Languages (the world’s leading dictionary publisher) in its online *Google Dictionary* characterises *research* (noun) as “the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions,” and the verb form of *research* as “to investigate systematically” (<https://languages.oup.com/google-dictionary-en/>). Academic research, the quest for knowledge, is essential for progress in the academic world across all academic disciplines.

Glossary of concepts

ACADEMIC DISCIPLINE

Academic discipline is a branch of knowledge defined by its particular object of research, terminology and research methods. Various classifications of academic disciplines exist, but in the most general sense, academic fields are divided into the humanities and arts, social sciences, natural sciences, formal sciences and applied sciences (also called professions).

APPLIED SCIENCES

Applied sciences (also called professions) include business, engineering and technology, architecture and design, medicine and health sciences, education, agriculture and forestry and military science.

FORMAL SCIENCES

Formal sciences include mathematics and computer science.

THE HUMANITIES AND ARTS

The academic field of the humanities and arts incorporates philosophy, history, theology, semiotics, linguistics, literary studies, law, performing arts, visual arts, area studies and ethnic studies (also called cultural studies).

NATURAL SCIENCES

Natural sciences include astronomy, biology, chemistry, physics, planetary or space sciences and earth science.

SOCIAL SCIENCES

The field of social sciences embraces anthropology, archaeology, communications, economics, ethnology, ethnomusicology, folklore, geography, political science, psychology, sociology and social work.

Theoretical background

In the academic world, knowledge is generated through research and is acquired further through learning. The process of learning in academia integrates all essential language skills (but not only language skills) at an advanced level – reading, listening, writing and speaking, and these skills also involve practice that is firmly founded on research. One could call this process a circle ‘of wisdom’ (a circle which is, fortunately, simultaneously a vicious one). In its most positive sense, this circle of wisdom distinguishes academics – both researchers and lecturers, and their students – from the

rest of general population, granting them the status of an elite in society and ensuring that the quest for knowledge becomes their shared lifetime goal.

Many recent authors (cf. Janigová, 2014) have agreed that the principle of research is to develop and design, verify and refine theories in a systematic search for new information that can be used by humanity in its everyday existence. The results of research are important in both academic and non-academic areas of human existence and they contribute to the progress of humankind in most general terms – by providing reasons, explanations and applications for individuals and groups.

There are two elementary types of research – basic or fundamental or theoretical research and applied research – and each of them can be performed as either routine or revolutionary research. According to Bentley et al. (2015), basic research, also called fundamental or theoretical research, is the study of the basic principles, rules and reasons of a particular phenomenon, event or process. It is original, usually systematic in nature and deep in its insight into a problem, and does not usually lead to immediate applications or practical solutions. On the other hand, applied research uses and applies the findings of basic research in order to solve specific problems in, for instance, experimental research or interdisciplinary case studies. While theoretical research mostly generates theoretical knowledge, applied research uses this theoretical knowledge for more practical purposes, and therefore one could characterise the former as theory building and the latter as theory testing. Other classifications of research are outlined below in Subchapter 2.2.

In order to reach other members of academia, the results of research have to be published. Academic publications – whether a book, an article in an academic journal, or a thesis – are all results of academic writing and

their main aim is to document research procedures and research outcomes; essentially, to share knowledge.

Academic writing has its own particular forms, principles and rules, and it also follows specific processes. These structures respect the forms, principles, rules and processes of research, and all share the fundamental notion of objectivity. If research goes beyond a subjective, individual, opinion-based frame, then academic writing follows the same route and avoids the use of opinions, preferences and unsystematic steps.

Academic writing mechanics

The main aim of academic writing is to document how research was performed and to present the results which the research provided. In the case of a thesis, whether this is a Bachelor thesis, a Master thesis, or a doctoral dissertation, there are several specific reasons for it to be written. In his famous book *How to Write a Thesis* (2015) the first edition of which was published in 1977 in Italian and then translated to 17 languages worldwide (Eco, 2015, p. ix), Umberto Eco offers a well-founded justification for the need of writing a thesis and its defence focusing on humanities.

For Eco, the process of writing is more important than the thesis itself, because he sees academic writing as an intellectual exercise which is worth performing. He considers the thesis and its defence as a defining event that concludes the study (or one level of study) and in which students should prove that they are capable of making something out of their studies. . Eco also claims that the thesis writing process is a demonstration of a student's independence and personality development, as well as their training in accuracy and responsibility. Eco stresses the significance of the aspects of academic humility, respect, openness and judgement. He insists that

students should experience intellectual pleasure and apply their own originality, invention and imagination in the process of writing. For him, the process of finding an intriguing topic, identifying a subject, being able to locate information about the field and turn it into an interesting text in a thesis is one of the most rewarding activities in higher education and one in which all student authors should take pride in. All of the editors and translators of Eco's book agree that these principles remain valid despite the technological changes that have influenced the process of writing, such as computers or text editors.

All of the authors quoted, paraphrased and referenced in this textbook would agree that, regardless of the field of study and the advancements in information technologies, research resulting in a written thesis should prove that student authors of a thesis have the ability:

1. to choose a relevant topic within the scope of their studied discipline and to study its elements within a broader perspective of the research field
2. to formulate research goals, research aims and research questions
3. to define a research problem and a research hypothesis
4. to find secondary sources
5. to justify their choice of primary sources
6. to select a theoretical basis, research methods and research techniques
7. to work with the ideas of other authors and assess them in a critical way – to analyse, compare and synthesise ideas, quote and paraphrase them
8. to apply the principles of academic writing style in the text of their thesis
9. to suggest the spheres of use of the thesis
10. to defend the thesis.

Study questions

1. In relevant academic sources find the characteristics of normal research and revolutionary research. Design four research topics, one in the field of normal theoretical research, one in that of normal applied research, one in that of revolutionary theoretical research and one in that of revolutionary applied research within your field of study. Which of them do you consider most attractive? Which of them can you characterise as most relevant for the real-life practice?

2. Read one of the editions of Umberto Eco's book *How to Write a Thesis*. In his Introduction to the Original 1977 Edition Eco writes:

The advice in this book is especially useful for these students, as well as for high school graduates who are about to embark on their college studies and who wish to understand the alchemy of the university thesis. With this book, I would like to convince these students of two points:

1. One can write a *decent* thesis despite being in a difficult situation resulting from inequity past and present.
2. Regardless of the disappointment and frustration that these students may experience at the university, their thesis provides an opportunity to regain a positive and progressive notion of study. According to this notion, studying is not simply gathering information, but is the critical elaboration of an experience. Through study, students acquire the capacity to identify problems, confront them methodically, and articulate them systematically in expository detail. These skills will serve students for a lifetime.

(Eco, 2015, p. xx)

Explain the meaning of a university education and the academic writing of a thesis which is encoded in this quotation.

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CHAPTER 2 COMPLEXITY OF INVESTIGATION

2.1 Academic speaking: From the general to the specific

One challenge for student researchers is to learn how to systematize information and build a coherent and logical system of argumentation for presenting their findings to a scientific community. In order to do so, student researchers should understand the elements of the scientific method.

Scientific thinking differs from the way we think in everyday circumstances. People are confronted with certain situations, facts, statements, and claims in everyday situations and we make decisions according to our own experiences and expectations. Our decision-making, however, is influenced by conscious and unconscious biases, positive or negative experiences, our own expectations, or the expectations of the people with whom we interact and their prejudices or hopes. Therefore, we are not fully rational in our decisions and often decide and act in a way which contradicts pure logic. Other factors, such as traditions, beliefs, culture, religious convictions, identity, social status, or nationality to name just a few, all influence our decision-making and our subjective perception of reality.

Scientists try to avoid – or at least to minimize – the influence of these personal, social, or political biases and have built up a system of thinking which allows for the formulation of valid generalizations with the most precise definition of reality that is currently possible. Scientific method is basically a way of thinking which serves the goal of obtaining an objective, unbiased picture of reality through the application of the most sophisticated available methods of enquiry. Student researchers must learn how to apply

this way of thinking in their work and differentiate facts that objectively describe a certain situation or phenomenon from non-facts which distort reality.

Glossary of concepts

CANONICAL

Literature, ideas or publications that are considered core knowledge and which constitute a fixed and widely accepted set of information.

LITERATURE REVIEW

The process of studying, searching, analysing and selecting the most authoritative sources of publications for a scientific publication.

HYPOTHESIS

An assumption which is formulated to answer a concrete question about an observable phenomenon. A hypothesis must be falsifiable which means there must exist an opposite, negative answer to it.

STATE OF THE ART

This term primarily describes the most recent level of development in a branch of science – a currently valid and widely accepted set of theories.

EXPERIMENT

A rigorous procedure that is performed under controlled and precisely measured circumstances in order to test the validity of a hypothesis.

THEORY

A system of suppositions which is developed by scientists to explain the behaviour, the origin, and causes of some phenomenon.

LAW OF NATURE

The stable and predictable behaviour of certain phenomena which always occurs in the same way under given circumstances and which are universally valid.

REPLICABILITY

Theories rest on the assumption that experiments that prove their validity always produce the same exact result when repeated under the same circumstances.

Theoretical background

Scientific method applies rigorous steps to understand observable phenomena. Scientists typically apply inductive logic in research which in practice means that they try to gather all available and accessible information about a phenomenon as the first step. The gathering of information can be a long process and must include the study of all available publications about the question or topic under investigation. More often than not, the body of knowledge is so extensive that it is beyond the capacity of one single researcher to gain a comprehensive knowledge of the entire question under investigation in its full complexity. Scientific work therefore has gradually become a manifold cooperation between a number of individuals or even teams. Scientists share their scientific results in publications – scientific articles in journals or monographs – and this body of accumulated knowledge, often huge in scope, must be carefully studied by student scientists. This is called *literature review*.

When conducting literature review, the selection of the most relevant sources is an extremely important task for every researcher. One orientation point that can be helpful for young researchers in this selection process is

the number of citations. The most frequently cited works are generally those which contain key information about the topic under investigation. A publication that is frequently cited and referred to is sometimes termed *canonical* which means that the information presented in the publication by the author is widely accepted as being accurate and authoritative (cf. Oxford English Dictionary, 2021). Through literature review, scientists are also able to develop the *state of the art* in the field in which the investigation is conducted by collecting and comparing the latest available publications as well as synthesising information from various sources.

Subsequently, researchers try to find explanations for why the observable phenomena behave in a certain way; what causes them to behave in that particular way and what the effects of this behaviour are. Causality – the belief that everything has a cause and that there is a relationship between cause and effect – is one important principle in scientific enquiry. In this way, scientists make an effort to find satisfactory answers to their questions. Scientists think of possible answers to their questions. Suggested explanations which have not yet been proven are called hypotheses in scientific jargon.

A hypothesis is a “supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation” (Oxford English Dictionary, 2021, p.n.a.). In a less formal way, it can be said that a hypothesis is an idea that can be tested because we have data – often statistical data – that can be used for comparison. There are two basic types of hypothesis that researchers often work with. One type is called the *null hypothesis* which is a statement that can be disproved by an *alternative hypothesis*. A second type is sometimes referred to as *if, then* hypothesis (Helmenstine, 2020).

In order to test a hypothesis, scientists design experiments to provide results which can then be compared with the expected outcomes. An experiment is used to assign cause to an effect. When the results fulfil the expectations, the hypothesis can be considered to be accurate. If the results contradict the expectations of the hypothesis, researchers must carefully revise the suggested hypothesis or apply more precise methods of measurement and collect more data.

Scientific experiments must fulfil very strict requirements. One such requirement is that of replicability. This means that an experiment which is conducted in exactly the same way as it had been performed earlier must produce exactly the same results, even if the experiment is repeated any number of times. In another words, it is “The ability of a scientific experiment or trial to be repeated to obtain a consistent result” (Oxford English Dictionary, 2020, p.n.a.).

Once the hypothesis has been carefully tested and is considered valid, the scientists report their results to the wider scientific community. The scientific community – experts in the same or adjacent fields – closely examines the presented results, the suggested hypothesis and the circumstances of the experiments, and then proceed to discuss and debate the results. Conflicts can arise and scientists are often required to face merciless criticism from colleagues. It can take a long time for a hypothesis to be accepted as a valid and fully accepted explanation of specific phenomenon. Once the hypothesis has become widely accepted by the scientific community and its application produces consistent results, it becomes part of the scientific system and is often referred to as a *theory* – a system of ideas that is used to explain a particular phenomenon. Theories are different from laws of nature. The name ‘law’ suggests that the given

natural phenomenon always occurs the same way if certain particular conditions are present and the generalizations based on it are recurrent (Oxford English Dictionary, 2021).

Language study

In scientific presentations, speakers need to get from the general to the specific when observing natural phenomena. The following exercise provides a few expressions that can help us to express this narrowing down by giving concrete examples and exceptions to these examples.

1. In the following activity, try to select which words can be used for making general statements and those which are used for giving examples.

mostly, particularly, be a case point, mainly, by way of illustration, take/consider the following, largely, predominantly, all, the majority, for the most part, by and large, in the main, on the whole

2. Study the following example sentences that speak generally about an idea and try to formulate similar sentences by yourself.

Europeans, *in general*, have stronger sense of national affiliation than a common European identity. *In general*, teenagers tend to have a more radical view than their parents. In certain areas of the Earth people are *generally* living longer. Einstein is *generally regarded* as the father of modern physics. *It is now generally accepted* that DDT had caused a lot of damage to the natural environment. *On the whole*, the system is reliable. The computers are, *in the main*, products of the Dell company.

3. Which of the following expressions are synonyms of the word *except*?

including, typical, an obvious example of, saving, apart from, including, omitting, it is true of, besides, other than, but, by way of illustration, bar, aside from

4. Prepare a short speech of three to five minutes. Please note that an average person uses 130 words in a one-minute-long speech, and therefore your speech should be between 390 and 650 words.

Sample speech:

FREE SPEECH IS THE CORNERSTONE OF SCIENCE

In my talk, I would like to argue for freedom of speech and prove that free speech is a cardinal condition for serious scientific research. I would like to define what freedom of speech is in general terms and its legitimate boundaries. Furthermore, I will try to compare and contrast the concept of unlimited speech with the notion of limited speech and their implications for scientific research and publication.

Let me start with the definition of free speech for which I am going to take inspiration from David van Mill, an associate professor at The University of Western Australia who wrote extensively about this topic at the website of the Stanford Encyclopaedia of Philosophy. Mill, in the first section of his essay *1. Introduction: Boundaries of the Debate*, underlines that speech and liberty of expression has always been limited in every society because “it always takes place within a context of competing values”. Mill, referring to Alexander and Horton (1984), also points out that “the main reasons for justifying free speech (political speech) is important, not for its own sake but because it allows us to exercise another important value (democracy)” (Mill, 2017).

If we follow Mill’s logic, it is possible to argue that freedom of speech is inevitable in scientific research for the very same reason – i.e., to exercise the right of the researchers to investigate any natural or social phenomenon without restrictions and to ensure their right to inform the public about their findings.

Certainly, there can be limitations to the liberty of expression primarily when it clashes with other human rights. In these cases,

however, any society must take decisions what is the acceptable compromise when restricting freedom of speech.

There may be legitimate reasons for limiting free speech and one such reason can be the concept of ‘clear and present danger’ presented by Oliver Wendell Holmes, Jr. – justice of the United States Supreme Court, US legal historian and philosopher – who stated in the case of *Schenk v. U. S.* (1919) that “a restriction is legitimate only if the speech in question poses ... a risk or threat to safety or to other public interest that is serious and imminent” (Encyclopædia Britannica, 2015, p.n.a.). Examples of such risk can be cases of defamation – that is attacking someone’s reputation by a false publication in the press for instance – obscenity or prior restraint for security reasons. Cutting edge research, for instance, in sensitive fields of national security may fall in this area too.

Mill (2017), on the other hand, points out the ‘slippery slope’ argument in his essay which basically means that limiting freedom of speech may be a slide into censorship and tyranny. It is true that restrictive political systems exercise close control over the liberty of expression, therefore it is the responsibility of any society to work towards a ‘social contract’ that ensures the balance between the two requirements: freedom of speech and the degree of legitimate censorship.

One experiment to achieve balance between the two arguments is the attempt of western societies which is manifested by the term ‘political correctness’. Political correctness describes the deliberate use of language that causes the least amount of offense when speaking about groups which are identified by external markers such as race, gender, culture, sexual orientation, etc. Though PC has been widely criticized and ridiculed and its controversial origin that goes back to the Bolshevik Revolution in Russia makes it unacceptable for many people, it has been widely used and applied by politicians in an effort to avoid exclusion of various identity groups. PC remains a controversial topic and fuels fierce exchange of arguments even nowadays and contributes to the polarization of societies.

To conclude, it is evident that freedom of speech is a crucial liberty that must be guaranteed by legal regulations at the highest possible level, but it is also inevitable to maintain discussion about its characteristics and impact on research.

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2.2 Academic writing: From objective to hypothesis

“Research is a mysterious adventure
that inspires passion and holds many surprises.
Not just an individual but also an entire culture participates,
as ideas sometimes travel freely, migrate, disappear, and reappear.
In this sense, ideas are similar to jokes
that become better as each person tells them.”
Umberto Eco

Research performed for the purpose of thesis writing not only demonstrates a student’s existing knowledge within the scope of their study but is also expected to enlarge it. Earlier experiences with smaller-scale research projects and the preference for specific areas of the studied field are usually the best guides for the choice of the thesis topic.

In the course of the thesis research, students explore ideas, solve problems, make arguments and probe an issue, and their findings, however limited or partial they may be, when presented as conclusions form a contribution to the development of the research area.

The choice of the research topic is directly connected to the type of the research that enables the particular inquiry.

Glossary of concepts

QUANTITATIVE VS. QUALITATIVE VS. MIXED RESEARCH

QUANTITATIVE RESEARCH

Quantitative research is based on the collection and analysis of data. It is numerical and applies statistics or mathematics. It focuses on data that provide direct evidence, uncovers patterns and enables predictions of trends. Its results are usually presented in the form of graphs or tables (cf. Creswell, 1994).

QUALITATIVE RESEARCH

Qualitative research is descriptive and exploratory and deals with non-numerical information. It aims at identifying meaning, context, relationships between elements and connections between the studied features (cf. Bogdan and Biklen, 1992).

MIXED RESEARCH

Mixed research incorporates both quantitative and qualitative research methods. It works with collected numerical data as well as with meanings in context (cf. Kumar, 1996).

OTHER TYPES OF RESEARCH

These types are classified according to their purpose (cf. <https://innspub.net/types-of-scientific-research/>).

CLASSIFICATION RESEARCH

Classification research deals with the explanation of relationships in order to uncover similarities and differences and to categorise items into various groups on the basis of identified similarities and differences. It has several sub-types, namely comparative research, causal research, theory-testing research and theory building research.

CROSS-SECTIONAL RESEARCH

Cross-sectional research is usually performed as exploratory research and its main goal is to collect quantities of data to provide information about the immediate state of the topic and which does not take into account any history, development, or changes.

DESCRIPTIVE RESEARCH

Descriptive research focuses on the depiction of studied items and it tries to provide complex answers to the elementary questions of What?, Who?, When?, Where? And How?

EXPLANATORY RESEARCH

Explanatory research, or analytical research, aims to clarify relations between and among individual elements of studies. As such, it tries to contribute to answering the question Why? and it usually follows up on the findings of descriptive research.

EXPLORATORY RESEARCH

Exploratory research may be characterised as preliminary research or reference research. It usually involves a literature search and/or surveys of various kinds in an effort to detect the appropriate methods, feasibility and complexity of the investigated issues. This type of research is extensive and does not aim at a specific focus; its goal is to identify essential elements, and it usually preliminary to actual research.

LONGITUDINAL RESEARCH

Longitudinal research focuses on the collection of data over an extended period of time or at multiple points in time, and their analysis. It usually involves the collection of information over periods of weeks, months or years and the analysis may uncover trends, changes and patterns in the feature over the course of the studied period.

Theoretical background

As has already been stated above, the purpose of research is to contribute to the generation of knowledge and subsequently to the progress of humanity, as well as to provide guidelines for the solution of problems in various spheres of human existence. However limited the scope of the student thesis research may be, it still performs the functions listed above, and as such it must be planned according to the same principles.

Thesis research is usually a combination of primary (original) and secondary research. While primary research is focused on the study of primary documents through direct investigation and first-hand observation and analysis of, for instance, texts in a newspaper corpus, literary texts, films, blogs, laboratory experiments, surveys or interviews, secondary research is based on the analysis of secondary sources, such as academic books, journal articles or other academic publications which have already been written on the topic of study.

All types of research from the very small scale (for example, an academic essay), through the medium scale (for example, a thesis) to the extensive scale (for example, a research group) begin with the choice of relevant topic and they all follow the same procedure (cf. Monipally and Pawar, 2010).

1. The specification of the research object, i.e., the element of reality to be investigated = the choice of the thesis topic.

2. The identification of thus-far un-researched aspects of the element of reality, i.e., a gap in knowledge = the formulation of research goal(s), research aim(s) and research question(s).

3. An explanation of predictions for the research outcomes and the formation of a hypothesis = the definition of research issues and research hypothesis.

The first three steps in the research procedure are based on the review of secondary literature, an extensive search for and reading of academic books and academic journal articles related to the selected research topic. But the subsequent stages of the research procedure also require further acquisition, selection and thorough study of secondary sources.

4. Theory and methodology building = the choice of relevant theoretical foundations and the creation of a specific methodology, identification of specific approaches and methods of analysis.

5. The conditions for data selection and the procedure of their analysis = the justification of the choice of primary sources.

6. The analysis, critical assessment and synthesis of secondary sources = writing the theoretical and methodological sections of the thesis.

7. The application of the selected methodology to the obtained data = the analysis of primary materials.

8. Drawing conclusions = the synthesis of the secondary and primary research.

9. The implications of the conclusions for either theory or for knowledge in reality = the relevance of the findings for the broader field of research and relevance for practice.

10. Publication of research = thesis defence and the subsequent publication of the whole text or partial publication.

Academic writing mechanics

1. Relevance of the research:

The research topic which students choose must be within the scope of their research field and as such should reflect students' previous experience in the area of their study. The object of investigation is clearly defined so that others can identify it. The outcome of the research should be valuable and useful for other researchers.

2. Feasibility of the topic:

The topic should be selected with respect to the availability of secondary sources and the scope of research. The search for existing secondary sources and their quantity thus precedes the finalisation of the topic. The scope of the investigation should respect the set requirements of the thesis.

3. Possession of academic skills:

The choice of the topic has to be also guided by students' academic skills, such as their language skills, and their personal academic interests. Having the relevant skills is essential. Researching a topic that is attractive and interesting for students is a strong motivation and potentially brings better research results.

4. Specificity of the topic:

The topic should be narrowed on the basis of the studied secondary sources. The refinement of the topic is one of the most complicated research procedures. The research topic or its main features should be new so that the author can contribute new ideas which have not yet been expressed or revised aspects studied from a different perspective.

5. Research aims and intentions:

The definition of the research aims should answer the questions of why the researcher wants to investigate the topic (the motivation for writing the thesis), what the purpose of the research is (the reasons for writing the thesis), what one wants to achieve (the expected results to be presented in the thesis), the audience for whom the research outcomes will interest (the contribution to the investigated field),

6. Research questions:

Research questions are an enquiry to which the research tries to find a response. Research questions should correspond to the research aims, and each research aim should be represented by at least one research question. The formation of the research questions is based on the specific research aims and is dependent on the choice of primary materials. Research questions make the theoretical expectations more explicit and the research goals clearer.

7. Research hypothesis:

A hypothesis, thesis or a thesis statement is a frame for the research. It is a single sentence statement that formulates the topic and the goal of the research. It is the foundational claim which the research should attempt to prove and, as such, it affirms, controls and structures the argument followed by the research. Regardless of whether the hypothesis is verified or disproved by the research, the research provides a basis for the future research of the author or of other researchers.

Study questions

1. Define your field of study, describe your academic preferences and previous research experiences leading to the writing of shorter or longer research papers. Choose a topic for your thesis and examine whether your choice respects all of the requirements described in the Academic writing mechanics section of this subchapter above (points 1-4). Which types of research defined above do you expect to use in your thesis investigation?

2. Specify the main and partial research intentions and aims and formulate your research questions on their basis. Which of the secondary sources you already acquired were helpful in this task? Provide at least five

of examples of secondary literature. Try to choose at least one primary source which you plan to include into your analysis and justify its inclusion.

3. Karen Gocsik teaches students how to formulate a good hypothesis. After formulating your first working hypothesis, try to test it using the questions she outlines below. Did your hypothesis pass the test?

Does my thesis sentence attempt to answer (or at least to explore) a challenging intellectual question?

Is the point I'm making one that would generate discussion and argument, or is it one that would leave people asking, "So what?"

Is my thesis too vague? Too general?

Should I focus on some more specific aspect of my topic?

Does my thesis deal directly with the topic at hand, or is it a declaration of my personal feelings?

Does my thesis indicate the direction of my argument?

Does it suggest a structure for my paper?

Does my introductory paragraph define terms important to my thesis?

If I am writing a research paper, does my introduction "place" my thesis within the larger, ongoing scholarly discussion about my topic?

Is the language in my thesis vivid and clear?

Have I structured my sentence so that the important information is in the main clause?

Have I used subordinate clauses to house less important information?

Have I used parallelism to show the relationship between parts of my thesis?

In short, is this thesis the very best sentence that it can be?

(Gocsik, 2004, p.n.a.)

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CHAPTER 3 PROCESS OF EXPLORATION

3.1 Academic speaking: Logic of speech

The previous chapter provided a simple overview of the scientific method which is the generally accepted and acknowledged way of thinking and a required ‘code of conduct’ among researchers and scientists. The word ‘method’, however, may be a little bit misleading for student researchers, as expressions such as *approach*, *method* or *methodology*, *technique* or *tool* appear in various contexts and their usage can appear chaotic and confusing to beginner researchers.

The situation becomes even more complicated when student researchers are required to speak about their work, present their way of thinking and their attitudes towards the examined phenomenon or to persuade their audience that their steps comply with the requirements of the scientific community. When presenting the results of scientific research, young researchers must be absolutely clear about these concepts and they must be able to use them confidently.

Glossary of concepts

APPROACH

A general attitude and set of beliefs towards a problem or question which determines the steps of scientific investigation, the choice of methodology and the scientific tools used.

METHODOLOGY

A set of methods used in scientific investigation according to an overall plan, a framework of research.

METHOD

A data collection tool used to obtain quantitative or qualitative data.

RESEARCH TOOL

Equivalent to method.

TRIANGULATION

A combined or hybrid method of research in which quantitative and qualitative methods are combined to increase the validity of research data.

PARADIGM

A generally accepted belief about the correctness and validity of a concrete theoretical framework of a scientific school which serves as a basis for the formulation of theories and the definition of laws and determines the correct procedure of conducting experiments.

CREDIBILITY

The ability of some theory or person to be trustful and reliable.

VALIDITY

The reliability, soundness and logical clearance of some data or process of data collection.

Theoretical background

Science is about facts and the ways in which we deal with them. Although the expressions *approach* and *method* are often used interchangeably, there is a distinct difference between them. The word *approach* is a broad concept and describes the general way in which scientists deal with facts and investigated phenomena; in its original meaning, it is a way of getting closer to the answer to a particular question. When researchers work, they approach the observable phenomenon critically, i.e. "In a way that involves the objective analysis and evaluation of an issue in order to form a

judgement” (Oxford English Dictionary, 2021, p.n.a.). In science, judgements are formulated based on observation when data and information is collected via classifying, measuring, predicting, explaining, concluding, etc. All branches of science approach problems scientifically, but, depending on the nature of the given branch of science (natural, social, applied or formal), different methods can be used for data collection and processing.

Student researchers must also be able to differentiate between *methodology* and *method*. A broader strategy for a research approach is called methodology. Researchers can apply many different methods within a single methodology – i.e., the ways in which data are collected. In an academic context, researchers talk about framing methodologies of research and within the chosen methodology they list different methods which would be implemented to obtain data. Thus, methodology depicts how research is conducted, the way in which research is undertaken and describes the strategies which are to be implemented during the whole process. More simply, a research methodology is intended to provide answers to the question of ‘how’ research is conducted. Some examples of different scientific methodologies include ethnography (the scientific description of peoples and cultures), phenomenology (the science of phenomena) and ethnomethodology (a sociological analysis used to examine how individuals use conversation to construct a worldview).

Research aims and objectives determine the methodology which a researcher will choose. Researchers can design a methodological framework either to confirm or to explore some facts.

When research is exploratory in nature, it is likely that *qualitative methods* will be implemented for data collection. When researchers try to measure or test some phenomenon, *quantitative methods* will likely be incorporated.

Some basic research methods, also known as *research tools* or the ways in which data is collected for further analysis, include surveys, questionnaires, interviews, case studies, observation or experiments. In quantitative research, data are collected in numerical form and statistical methods are used to process the obtained information. Computer programs are frequently used to process large amounts of data and relationships between the variables are often represented by graphs and charts. Quantitative research is usually associated with the *positivist paradigm*, which presupposes that objective reality exists and “(1) that all knowledge regarding matters of fact is based on the “positive” data of experience, and (2) that beyond the realm of fact is that of pure logic and pure mathematics...” (Encyclopædia Britannica, 2015, p.n.a.).

In contrast, scientists in qualitative research often utilise observations, textual or visual analysis or interviews. A qualitative approach is usually associated with the *social constructivist paradigm* which underlines that knowledge is constructed through interactions among people and that social phenomena come to existence as ‘compromises’ between members of a society. Thus, social constructs do not exist in objective reality but are instead the result of human interaction.

Research methods are not applied in isolation but are often combined with one another during the research process in order to obtain a more reliable and precise set of data. The use of multiple methods in conducting research is called *triangulation*. “Triangulation is a method used to increase

the credibility and validity of research findings. *Credibility* refers to trustworthiness and how believable a study is; *validity* is concerned with the extent to which a study accurately reflects or evaluates the concept or ideas being investigated” (Noble and Heale, 2019, p.n.a.).

Language study

1. Some of the following words are used to express that something is caused by another thing. Select the correct words and write example sentences using them.

lead to, bring about, is caused by, create, is the result of, results from, is responsible for, arise from, make, stem from, generate

2. Which of the following expressions are synonyms of the word ‘effect’?

impact, influence, repercussions, implications, source, root, occasion

3. The words ‘affect’, ‘impact’, ‘influence’ can be used to create sentences which describe how something, or someone has an effect on something. Search for examples of such sentences.

4. Prepare a short speech of three to five minutes. Please note that an average person uses 130 words in a one-minute-long speech, and therefore your speech should be between 390 and 650 words.

Sample speech:

THE PHYSICAL WORLD AND HOW WE LEARN ABOUT IT

In this speech, I would like to shortly summarize what we know about the physical world in general and how this knowledge has been gained. I will point out how different branches of science examine the world and how this knowledge depicts a complex picture of physical reality. Let my talk start with a citation: “The beauty of a living thing is not the atoms that go into it, but the way those atoms are put together”. These were the words of Carl Sagan, an astronomer who became famous due to his thirteen-part television series titled *Cosmos: A Personal Voyage* (1980).

Scientists discovered that our world is composed of matter – a substance of which every object is made in the universe. A fundamental characteristic of objects composed of matter is that they have mass and occupy space. A further component of the physical world is energy. It is the property of matter which is manifested in its capacity to do work or cause change in systems. Albert Einstein’s most famous equation $E=mc^2$ states that matter and energy are the two manifestations of the same fundamental entity.

The characteristics of matter are studied primarily by inorganic chemistry which studies the elements and their interactions at the scale of atoms. Atoms are particles of elements which cannot be broken down further. Atoms of elements can combine with one another and form compounds. The physical objects that exist around us are all composed of these elements and their compounds.

Physics is the basic physical science – a systematic study of the inorganic world from the smallest subatomic particles to the largest objects of the universe. Depending on the particular field of study, we can speak about branches of physics such as nuclear physics, mechanics, optics or cosmology. Physics is the science of systems. All other natural sciences depend on physics because it deals with the fundamental aspects of matter and energy, how they interact and make the universe work. Chemistry, for instance, utilises the knowledge from physics how atoms are made up from smaller particles. Biologists use the knowledge generated by physics and chemistry when studying living tissues.

Life is another phenomenon that we would like to understand by studying the different characteristics and behaviour of the living matter. What the word ‘life’ depicts is such a complex phenomenon that even scientists have problems to define it. We can say that (biological) life is a *state* of matter which manifest certain attributes such as growth, metabolism, reproduction, responsiveness to stimuli, etc. Every living being is composed of one or more minimal units, cells, which can be a complete organism themselves. We know that life is present only on planet Earth where all living organisms are composed of carbon-based

molecules studied by organic chemistry. Life sciences, such as molecular biology, botany and zoology, try to collect knowledge about life and living organisms.

Knowledge about the physical world, energy or life does not come only from observation. Human ability of abstraction – considering something mentally exclusively by utilising human imagination – enables us to formulate theories and discover laws through formal sciences such as: mathematics and logic. These formal sciences are also utilized in all branches of natural sciences to develop and test theories, express natural laws in abstractions for example mathematical equations, and describe relations between causes and their effects.

Mankind does not research the physical world only for the sake of research but tries to utilize the accumulated knowledge to transform the physical world into a safer, more comfortable, and better controllable place and ensure the survival of the human species. Therefore, applied sciences such as engineering, medicine or computer science are constantly searching for better ways to implement the accumulated knowledge and build better machines, design more effective cures for diseases, or organize our lives in a better and more enjoyable way.

In summary, sciences can be defined as an effort of the mankind to understand the physical world in its true complexity and utilize this knowledge to improve the quality of life, guarantee our safety, and ensure the survival of the human species in the future not only on planet Earth but in the whole universe.

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3.2 Academic writing: Approaches, methods and techniques

“The beauty of a scientific approach is that it does not waste the time of future researchers.”

Umberto Eco

Literature review represents a fundamental element of every research project. The choice of relevant secondary sources and their critical appraisal are the result of extensive search for academic books, academic journal articles, encyclopaedias, dictionaries and other sources. The literature review contextualises every investigation and structures the analytical part of a thesis, providing its theoretical framework by incorporating relevant theories, methodologies and approaches.

According to Perez Canado and Pennock-Speck (2015), literature review also serves specific purposes:

1. It situates the research objective within the field of study
2. It proves the author’s critical assessment of previous studies
3. It summarises the main development and methods
4. It identifies the author’s spaces by defining possible gaps and missing aspects, the author may address in the investigation (Perez Canado and Pennock-Speck, 2015, pp. 23-24).

The literature review also demonstrates the author’s critical thinking skills.

Glossary of concepts

CONCEPT

Concepts are abstract ideas and notions. A concept is a term or a label which represents, in a generalized manner, an aspect of the reality. Concepts are essential elements of thoughts and beliefs, and they are usually defined with the usage of other terms (Monipally and Pawar, 2010).

MEASURE

Measures in research are the elements to which participants of research respond; for example, interview questions, questionnaire situations or survey tasks.

PARADIGM

A paradigm is a complex of assumptions shared by members of a research field or a research community. Paradigms direct the choice of research phenomena, methods and approaches.

PROPOSITION

Propositions in research are claims that specify relationships between concepts. They are also called hypotheses.

THEORY

A theory is an established principle or a set of principles developed to explain a phenomenon or an aspect of a human existence. It is a result of a long-term observation, testing and analysis. It usually encompasses facts, rules and predictions (cf. Wacker, 1998).

VARIABLE

Variables are measurable indicators associated with concepts. They are items, things, phenomena or persons which researchers intend to measure.

BRUTE FACTS vs. INSTITUTIONAL FACTS

Brute facts are facts that do not need any explanation. Institutional facts, on the other hand, acquire their status on the basis of agreement; for example, good and bad manners.

Theoretical background

The composition of theoretical framework of a thesis through the literature review represents a complex process that begins with the compilation of relevant texts, their critical assessment, analysis, comparison and other evaluations, and it ends with the composition of a coherent written text that includes theoretical foundations and approaches, as well as a methodological basis for the analytical part.

The theoretical part of the thesis shows the author's understanding of concepts, definitions and theories used in the field and the selection of those which the author considers as relevant for the purposes of the investigation. The choice and critical evaluation of these theories is driven by the defined and specified research topic, the research aims, the research questions and by the formulated hypothesis. At the same time, it places the partial investigation limited by the scope of the thesis into the broader perspective of the research field.

The complexity of reading and writing mechanisms in the theoretical part of thesis requires not only advanced reading and writing skills, but also the skill of critical thinking. The website <https://www.criticalthinking.org/> characterises critical thinking as “a rich concept that has been developing throughout the past 2,500 years,” and also offers a more complex definition from Michael Scriven and Richard Paul:

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness.
(<https://www.criticalthinking.org>)

According to Jesson, Matheson and Lacey (2011) critical thinking “involves analysis of positive as well as negative features. It means recognising the strengths and weaknesses of research others have undertaken and being able to articulate why and how you think their ideas or theories might be improved” (Jesson, Matheson and Lacey, 2011, p. 16).

The theoretical framework connects the author to previously published works in which he/she can find relevant theories, approaches and methods the selection of which depends on their relevance, suitability and explanatory abilities. The theories are expected to address the elementary questions of why and how, the approaches create the space for less descriptive and more analytical procedures, and the methods identify the aspects relevant for examination. In combination, they explain and allow for the analysis of the meaning, features, characteristics and specificity of the studied material.

In the theoretical framework the author engages in an academic argument with the authors of previously published works. Academic argumentation is not about the negation of other authors but about expressing the author’s own idea, backed up with arguments, data, or analysis, and comparing it to the opinions of other authors.

Academic writing mechanics

Theories:

The theoretical basis in philological research draws on theories applied in anthropology, sociology, cultural studies, political science, gender studies, media studies, literary studies, post-colonial studies, pragmatics, semiotics, linguistics, translation studies and other fields.

Methodologies:

Research methodology includes ways in which research is organised and methods and techniques employed in conducting the investigation.

Methods of research:

Research methods are techniques used for data collection or the collection of evidence for analysis. The most frequently used research methods are listed in two categories – qualitative and quantitative.

Qualitative research tools include interviews, focus groups, observations, document analysis, oral histories or life stories.

Quantitative research tools are represented by surveys or questionnaires, observations, document screenings and experiments (cf. <https://libguides.newcastle.edu.au/researchmethods>).

Different types of assessment methods include analysis, synthesis, comparison, generalisation and statistical evaluation. While analysis is a detailed examination of the parts, features, elements of something, synthesis is the opposite – the collection and combination of various individual aspects or features into one whole on the basis of the connections between them. Comparison evaluates the similarities and differences between two elements, while generalisation is a form of abstraction focusing on the shared properties of items. The statistical evaluation of data helps to analyse the results obtained in the process of collection.

Research approach:

The ways in which research is organised is also called an approach. It is a plan or a procedure of investigation divided into individual steps.

Study questions

1. Study the individual concepts in the Glossary of Concepts section above and find three examples for each of them which are connected to the area of your thesis research. Try to look for examples that you will use in your thesis.

2. Find appropriate theories that you will apply in the theoretical framework of your thesis. Justify your choice on the basis of your research topic, research aims, questions and the formulated hypothesis. Furthermore, try to outline the methodology of your research by finding research methods and drafting your research approach. Describe the possible application of selected methods on your primary sources.

3. Study the history of the concept of critical thinking. Find out about those thinkers (philosophers and other academics) who have contributed to the development of the concept by supporting it and also those who neglected it or fought against it.

4. Develop a short, one-page text with an academic argument about the following quotation.

Research shows that there is only half as much variation in student achievement between schools as there is among classrooms in the same school. If you want your child to get the best education possible, it is actually more important to get him assigned to a great teacher than to a great school.

Bill Gates

(<https://www.brainyquote.com/topics/research-quotes>)

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CHAPTER 4 RESEARCH LITERACY

4.1 Academic speaking: The language of research

Conducting research and producing scholarly papers about research is only one aspect of a student researcher's task. Another and no less important skill is the ability of the researcher to speak about the topic, processes and results in a clear and coherent way. There are many different genres of scholarly papers and publications, including original research studies, review articles, case studies or book reviews.

When researchers are required to speak about their results, they typically follow a simple pattern. One widely known method of presenting a study is known under the acronym IMRaD. The acronym stands for 'Introduction – (Materials and) Method – Results and Discussion' and provides a more or less universal scheme that can be used in almost any research setting.

Most frequently, scientists speak about their research in a conference setting or at a symposium. During a conference, researchers are usually grouped into sections where different speakers present their results. Presentations are mostly followed by a Q&A sections (questions and answers) which provides the audience with the opportunity to comment on the speech and put questions to the speaker; in some cases, the Q&A session serves as a platform for the fierce exchange of conflicting views. Researchers must be able to stand up and explain their approach, defend their chosen methodology and provide satisfactory answers to the questions of their colleagues who are, in many cases, recognized experts in the same field. Student researchers should take these opportunities as an excellent

learning opportunity and should not be afraid of speaking up in front of their colleagues.

Glossary of concepts

RESEARCH QUESTION

The main questions that direct the research activity. This is the primary question that sets the direction of the research project. It is also used to generate secondary questions which search only partial, less important facts.

THESIS STATEMENT

The main statement of your speech which is closely related to the research question. This can also be interpreted as an answer to the research question.

DATA COLLECTION

A process in which scientists apply different research methods and tools to obtain information that describe specific aspects of the observed phenomena. Data are usually transformed into numerical form.

STATISTICAL METHOD

A mathematical method performed through systematic and rigorous operations with the aim of obtaining mathematical evidence about an analysed phenomenon.

EXTRAPOLATION

An action in which scientists assume that the trends identified during smaller-scale research (for example, by conducting experiments) will be replicable on a larger scale with the trends remaining unchanged.

Theoretical background

The IMRaD format provides an excellent guideline for student researchers not only for structuring their scientific papers but also for developing a speech in which they will be able to discuss and debate their findings with fellow researchers. Naturally, IMRaD is not the only format that is used for writing scholarly papers, but, nonetheless, it provides a clear and comprehensive structure for student researchers and can serve as a basic outline. “Unlike theses in the social sciences, the IMRaD format does not include a separate theory chapter” (Search and Write, 2020, p.n.a.).

The first letter of the acronym – I – stands for ‘introduction’. Always remember that you will never have a second chance to make a first impression. This is also true for scientific presentations. The beginning is always the most sensitive part of any presentation since the speakers – especially when they are young or inexperienced scholars – can be nervous and tense; similarly, the circumstances in the conference room may not be ideal or the audience can be tired or unresponsive. Quite simply, there are many factors that can influence the overall performance of the speaker. It is, however, good to bear in mind that the introduction is the part of your speech in which you set the scene and catch the attention of your listeners. It is not only a general requirement but in fact an opportunity to show and persuade your audience that you are informed and knowledgeable about the field of study. Therefore, your introduction should contain a concise, but not too extensive summary of the given subject. Do not forget that your colleagues are also experts in your field or in adjacent fields and therefore there is no need to teach them the basics. The only – but very important – requirement is to show your audience that you are well informed about the actual state of the art. In order to do so, you should refer to some of the most

relevant (by which we mean most often cited) studies that you have used to build the theoretical framework for your work. The main emphasis should be on two aspects: a) what we already know about the subject and b) what are the questions to which we are seeking answers. The key orientation point in this section of the speech is your *research question*. The introduction should serve as an explanation of why you have chosen the given question, how the question was formed, what inspired your work, and how the answer could contribute to the development of the given field of study.

The second part of your speech should focus on the methodology (M) used during the actual research. Always remember that there is difference between the concepts of method and methodology. While methods mostly refer to the ways of data collection, methodologies are complex procedures based on scientific *paradigms* that describe your assumptions, way of thinking, steps and conduct during the realization of the research task. A methodology is essentially a system of methods. Methods can be grouped differently, but a basic distinction between them is that there are methods which are concerned with *data collection*, a further group of methods which consist of *statistical methods* which are used for establishing relationships (cause and effect) between the different data, and a third group of methods which consist of methods which are used to evaluate the accuracy of the results (Kumar, 2008).

Research methodology has many dimensions and research methods do constitute a part of research methodology. The scope of research methodology is wider than that of research methods. Thus, when we talk of research methodology, we not only talk of research methods, but also consider the logic behind the methods we use in the context of our research study and explain why we are using a particular method or technique, and why we are not using others so that research results are capable of being evaluated either by the researcher himself or by others. (Kumar, 2008, p. 5)

Thus, when we speak about methods, we answer the question of what has been done; when we speak about methodology, we concentrate on the questions of how we have proceeded in our research and why have we chosen that given path. An accurate and clear description of the applied methodology is crucial when speaking in front of an audience of researchers.

The letter ‘R’ in the acronym IMRaD stands for the *results*. While the previous two parts of your presentation should show your audience how you arrived at your results, this part should be used to present the *essence* of your work. Therefore, in this part of your speech, you may rely heavily on visual aids – graphs, charts, diagrams, etc. – to clarify fully the relationship between the data and your assumptions. Cause and effect relationships must be clearly described here with clearly organized data. The presenter can classify and categorise the data, explain and interpret the results and assess or evaluate their meaning. It is also important here to underline why the results have been interpreted in a certain way and what the implications of that interpretation may be.

The final part of a scientific presentation is the discussion, as represented by the letter ‘D’ in the IMRaD acronym. Discussion is the arena in which conclusions are made. If you were working with one or more hypotheses, you should be able to tell whether your hypothesis had been strengthened or disproven. It is also crucial that you provide clear answers to your research questions here and also compare and contrast your results with the results of similar projects. By comparing your results with other research, it is possible to map out the alternative explanations to your results, to identify the possible advantages of your approach or the potential weaknesses of your work. In this part of your presentation, you should also

try to determine the extent to which it is possible to *extrapolate* your findings and whether there is any room for generalization. Last but not least, you should also mention the practical implications of your research. Do not forget to provide your audience with a summary and a conclusion.

Language study

Researchers and scientists search for the truth. We use many words to express that something is true.

1. Select the expressions which mean that something is true.

show, prove, contradict, demonstrate, can be seen, is evidence of, reveal, refute, confirm, invalidate, demolish, support, back up, corroborate, validate, substantiate

2. Researchers are often unable to make a statement which is absolutely true. Use the words or phrases below and write example sentences:

suggest, indicate, imply, there is some evidence, it gives the impression that, it leads to the conclusion that.

3. Prepare a short speech of three to five minutes. Please note that an average person uses 130 words in a one-minute-long speech, and therefore your speech should be between 390 to 650 words.

Sample speech:

THE METAPHYSICAL WORLD AND THE MEANING OF WORDS
Although human life takes place in a physical world, we are able to 'look' beyond the boundaries of it using our intellect. Today, I would like to speak about this ability and about the problems and questions that arise from this situation.

We use language to describe the world in which we live and when we say for instance that ‘There is a red pencil under the table’ our statement contains words which have *referents* that are real physical objects. Our language, however, is capable of much more. We can make statements in which the words do not refer to real physical objects. In fact, if we spoke only about the physical world, our language would be very limited. When we speak about objects, persons or their acts or qualities that do not exist in the physical world we shift in the metaphysical domain. The Greek word ‘metaphysics’ refers to the (part of the) reality which exists behind or beyond the natural world. The Merriam-Webster dictionary defines the word metaphysics as something that is more comprehensive or transcending (Merriam-Webster Dictionary, 2021).

The concept of the metaphysical world is as old as humanity itself, since human intellect has always been able to develop whole universes using imagination and fantasy. The great number of folk tales, legends, and stories are just one proof of that. Some ancient philosophers, Plato for example, even described a world by applying a hierarchy in which non-material (meaning metaphysical) concepts such as beauty, justice, heroism, etc. are at a higher level of existence than material objects. Metaphysical concepts are perfect in themselves but every (human) being who is able to recognize them will recognize them differently. This is because everybody is capable of recognizing a different aspect of that given perfect form.

Alexius Meinong – a 19th century philosopher – went one step further and developed an ontology (a system of being) which put the concepts into three categories. Besides objects that are existent in the physical world, he names two categories of concepts that exist beyond the physical world. For example, numbers and theorems do not exist as physical objects, but everybody recognizes them and, according to Meinong, they subsist – i.e., they exist at a minimum level of existence because they do not manifest in the physical world but also do not contain any sort of impossibility. The last category of concepts is the group of everything that one can possibly think of. In this category, the objects are being given. This type of non-existence is termed *absistence* by Meinong (Chisholm, 1989). Basically, this is the category into which belongs everything that we can actually think of, even nonsense objects such as ‘wooden-iron’ or ‘square-circle’. So, what is the situation with fictional objects or persons; are they non-sense too? No, if we accept that they appear and exist in a specific domain, in a universe of discourse within which the assertions made can be either true or false (PBS, 2016). Thus, the existence or non-existence of an object depends on the discourse in which it appears.

The fact that we recognize non-existent objects is great because we are able to expand the boundaries of our finite and limited world into an unlimited cosmos where we can imagine everything and can experiment

with anything. This opens for us the possibility to talk about philosophy, truth, beauty, religion, and other domains which are beyond our everyday physical reality but have a very powerful culture-forming influence.

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4.2 Academic writing: Primary and secondary sources

“Periodically I receive letters from students who write,
‘I must write a thesis on such-and-such a topic.’
(The list of topics is immense.
Some of them, I must admit, bewilder me.)
They ask, ‘Would you be so kind as to send me
a complete bibliography so that I can proceed with my work?’”
Umberto Eco

The compilation of a working bibliography for the literature review conducted in the theoretical part of a thesis, the selection of primary sources for its analytical sections and the assembly of a final bibliography of the thesis is a continuous and systematic process. It begins when authors identify possible topics for their research, and it continues throughout the course of writing the thesis.

Authors of academic publications usually find their own individual approaches to the selection and recording of individual sources. These procedures may vary depending on the genre of publication and the type of investigation. Different fields of inquiry have their own requirements for the types of sources and their variants.

Various genres of academic writing also have specific conditions for the selection of sources and the amount of sources that the author should use.

Glossary of concepts

GENRES OF ACADEMIC WRITING

(<https://libguides.roanoke.edu/c.php?g=540427&p=3701131>)

(<http://www.uefap.com/writing/genre/genrefram.htm>)

ACADEMIC ESSAY:

A genre in which an author writes about a selected topic using ideas and arguments based on the author's own reading. In the text the authors integrate information acquired from the sources with their own knowledge and opinions.

BOOK AND ARTICLE REVIEW:

Book or article reviews are often written for academic journals that carry a review section, but they can also be used for publication purposes as academic journals publish articles only after they have passed through an evaluative peer-review procedure which determines the suitability of the article for its publication (usually performed by one or more anonymous experts in the research field).

A review is not only a summary of the discussion in the article or the book; it should be evaluative as to the purpose, targeted readership and relevance of the presented research. The review may also include a commentary on the general organisation and writing quality.

CASE STUDY:

A text resulting from an investigation into one specific problem, aspect, or element. The author usually combines various research methods and approaches (for example, library and archival research, field-work and data collection) strictly focusing on the selected issue. Different types of case studies include exploratory, descriptive and explanatory forms.

CONFERENCE PAPER:

An academic report on a researcher's partial research. It is usually prepared in a written form before the conference and presented orally at the academic event.

CONFERENCE POSTER:

A conference poster is a relatively recent genre of academic writing. Its purpose is to provide a report of one's partial research in a form of short texts, tables, charts, graphs or images. At a conference (or seminar, workshop, etc.) it serves as a basis for the discussion between the author and other participants at the academic event.

REFLECTIVE WRITING:

Reflective writing can help authors to respond to academic assignments which that they are required to fulfil; for example, to consult the required reading assigned by lecturers or to perform smaller-scale research for a course. They also help those who assign the task to check that the authors have performed the tasks and gained knowledge from them. They may take the form of a journal, a learning diary, a logbook, a reflective note, an essay diary, a peer review or a self-assessment task.

RESEARCH ABSTRACT:

An abstract is usually part of more extensive research genre, such as a thesis, project or report. It is a concise summary or overview of the research topic and its aims, research questions, hypothesis, theoretical framework and primary sources.

RESEARCH PROPOSAL:

A genre which usually precedes more complex types of research. It is usually written in the form of a research project. The purpose of a research proposal is to prove that the author has selected the research topic, theoretical framework with methods and approaches and relevant primary sources.

RESEARCH REPORT:

A research report is a text outlining the research processes, the data used, and the findings revealed by the investigation. It often includes information about the possible applications of the research. It is descriptive and summarises essential characteristics without dealing with details.

THESIS AND DISSERTATION:

Bachelor and Master theses and doctoral dissertations are part of the higher education tradition in many countries. They are a longer-form academic writing genre that records and publicises the results of students' investigations.

Theoretical background

Not all publications are relevant secondary sources for researchers to use in their investigation and subsequent writing. Among those that are relevant for academia we can list academic monographs, collections of academic articles, academic handbooks, conference proceedings, collections of abstracts, academic textbooks, academic journals, encyclopaedias, dictionaries, bibliographies, theses and dissertations, biographical sources, yearbooks, atlases and statistical data sources. More recently many academic sources are published not only in print but also in electronic formats or are available simultaneously in both print and electronic versions.

Academic publishers and university and research libraries have also adapted to the new trends enabled by new and still rapidly developing computer-based technologies. Most academic publications appear not only in bookshops and on the shelves of libraries but are also available in international electronic databases and on the Internet websites of publishers.

In response to the above discussed changes in publishing and storage of sources university and academic libraries now provide much more complex services than they did in the past. Access to print sources is complemented by access to online catalogues, journal databases, electronic archives of documents or large corpora of works. Inter-library book loans have been enhanced by the exchange of electronic resources. Information systems of libraries are integrated into universities' online platforms and academic information systems. Many sources, for instance, periodical publications, are available online and the internet websites of newspapers have their own archives equipped with advanced search tools.

Many sources which were originally printed or which were available in photo archives, film archives, on microfilms and microfiche are being gradually digitalised and are becoming more accessible to researchers via the Internet.

Academic writing mechanics

As it has been suggested several times above, the collection and assessment of relevant secondary sources for a literature review in the theoretical part of the thesis and the identification of primary sources based on carefully selected criteria are challenging tasks for researchers.

The process starts by drawing up a reading list, i.e., a compilation of a working bibliography with an extensive number of sources related to the research topic. The working bibliography includes all sources that researchers find during the initial stages of their investigation. Many of the sources might not become part of the final bibliography of the academic publication, but instead serve to orient the author in the chosen field of

research and to place the chosen topic into its broader context (cf. Perez Canado and Pennock-Speck, 2015).

With the formulation of research aims, research questions and a hypothesis and preliminary readings, the selection of secondary sources becomes easier and more focused. At this stage authors are able to put aside sources that do not appear specific enough or which are entirely irrelevant, and they can replace them and add more texts corresponding with the individual research aims. Hence, the working bibliography is constantly being modified during the research process and only turns into the final bibliography at the end, prior to the publication of the research text.

Depending on the genre of academic writing, the sources used in the research are either compiled into a bibliography or into a list of works cited (or a list of references). A bibliography includes all relevant sources; both those cited and paraphrased in the text and also those that serve as background reading only and are not actually mentioned in the text. The list of works cited or the list of references contains only those sources that are used, i.e., quoted or paraphrased in the text, although some academic genres or publishers may require both the list of works cited and a bibliography.

From a practical point of view, an author needs to record the bibliographic information about all relevant sources in order to be able to compile the bibliography with all of the necessary data. Different publishers, including universities, have their own requirements for the formatting of entries in a bibliography, and it is therefore necessary to record as much information about the source as possible.

The aim of a literature review is to critically assess existing research related to the chosen research topic. The main tasks of the author in this section of the theoretical part of the thesis is to place his/her research topic

into the field of investigation, to summarise previously published research relevant for the research aims, and on the basis of the critical evaluation choose relevant research approach and methods, i.e., to build a research methodology.

In the critical evaluation of existing research, the author identifies problems, controversies, missing elements, shortcomings, mistakes or the lack of clarity, thereby proving the relevance of his/her special topic and justifying his/her aims and research questions – usually proceeding from more general to more specific aspects. The author builds the text as a summary of existing research outcomes, a comparison of various approaches, methods and techniques, an interpretation of statements by other researchers and a synthesis of prior research in the most specific context of his/her own planned investigation with the goal of establishing a relationship between the ideas of different authors and his/her own expectations.

The selection of primary sources – materials that a researcher analyses following the chosen approach and applying the designated methods – observes a set of defined criteria. The criteria of relevance applied in the process of the selection of primary sources should be described in the text and must respect the requirements of the academic genre and the field of investigation. In the case of students' theses, the criteria define, among other, the following:

1. the quantity (materials should respect the type of thesis and their suitability, manageability, availability and variety): for example, the size of a corpus of texts, the number of units of language, the number of films or the number of novels.

2. the period (materials should be limited by the author's life experience, the periods studied or the comparison of several chosen eras): for example, the era covered by the research task, the years of publication of newspapers, or the period of the author's literary production.

3. the geographical, cultural, language and other limitation (materials should reflect the geographical, cultural, and linguistic background of a researcher): for example, Slovak and Russian versions of translations of English originals for populations in non-Anglophone countries.

Study questions

1. Analyse the text by Eco quoted at the beginning of this subchapter and the text below. What does Eco think about the degradation of the level and outcomes of university education? What does he think about the broadening of research fields? Do you agree with him? How does he define the purpose of literature review? What is your own opinion about the accessibility of sources in your field of study?

In a literature review, the student simply demonstrates that he has critically read the majority of the existing 'critical literature,' or the published writings on a particular topic. The student explains the literature clearly, connects the various points of view of its authors, and thus offers an intelligent review, perhaps useful even to a specialist in the field who had never conducted an in-depth study on that specific topic. (Eco, 2015, p. 3)

2. Identify which academic writing genres are incorporated in the genre of the thesis.

3. Compile a working bibliography for your own thesis research. Include at least one relevant for your research topic item in each of the following categories, in either print or electronic format: a monograph, a

collection of academic articles, an academic handbook, conference proceedings, an academic textbook, an academic journal article, an encyclopaedia, a dictionary, a thesis.

4. Identify relevant primary sources for your investigation and make a list of the criteria you have applied in their selection according to the three categories listed in the text of academic writing mechanics above.

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CHAPTER 5 IDENTIFICATION AND SOLUTION

5.1 Academic speaking: Presentation problems

An argument is always a conflict situation and many of us struggle to handle conflicts of opinions in a mature and professional way. Arguing professionally, however, is an elementary requirement among scientists and researchers.

The final stage of scientific presentations is usually a questions-and-answers section in which the speakers are required to explain and clarify certain aspects of their research and, more often than not, must face criticism from their fellow researchers, mainly when their colleagues are ardent supporters of a rival methodology or look at the given problem from a different perspective based on an alternative approach.

Arguments in science are inevitable and can be highly productive because they contribute to the general discussion about issues and can motivate researchers to examine the question under investigation from a different point of view. There are, however, certain unwritten rules to this type of discourse and a generally accepted code of conduct that student researchers are also expected to follow.

Glossary of concepts

ETHICS

A set of moral principles that provide orientation points for a person to determine correct ways of behaviour.

RESPECT

A feeling or demonstration of admiration for someone because of his/her qualities, achievements or status.

DIGNITY

A state of being worthy of honour and respect. The quality of a person regarded as a valuable member of a community.

EVIDENCE

Facts, data, and information which indicate that something is true.

FALLACY

A logical error in arguments or a mistake that makes an argument invalid.

CORRELATION

A logical relationship between one or more facts, processes, or arguments which point in the same direction or suggest a similar outcome.

CAUSATION

The process or act of causing something. The evident relationship between a cause and its effect.

Theoretical background

A scientific discussion follows the same patterns as everyday arguments. The only difference is (or rather should be) the rigorous use of facts and data in constructing arguments. Scientists and researchers, however, are also humans and are also influenced by their feelings. They can be angry, jealous or can even hate their colleagues and see them as rivals or even as enemies. Professional conduct, however, dictates specific rules for anybody who wishes to become an accepted member of a scientific community. In the following section, a series of suggestions are discussed which should be

considered by student researchers when they prepare for their question-and-answer sessions.

Honesty and fairness are also important elements in scientific research. A complex set of *ethical* norms ensure that researchers behave fairly and do not, for instance, abuse the information and data to which they have access. Fairness also applies to the scientific discussion. In simple terms, researchers should not deliberately lie, nor should they modify data in order to achieve a specific desired result. During an argument, therefore, scientists should behave fairly and should not abuse any potential weaknesses of their fellow researchers. A scientific discussion is always a learning opportunity and this is particularly true for student researchers.

An argument is a dialogue between two participants who should respect each other. In practice, this means that the participants in an argument should listen to each other and remain in the framework of the discussed topic during the discussion. It is absolutely forbidden to make comments about the physical appearance, traditions, beliefs or any other personal feature that might be offensive to the other participant. We can attack ideas, but never the individual. Indeed, the opposite is true – we are required to show respect to our partners, acknowledge that they are highly valued professionals and that the suggested ideas or alternatives really do contribute to a better result. When you preserve the dignity of your partner in an argument, you will not only win the argument but can even win the heart of your audience.

Always use evidence and proof in a scientific argument. Even everyday situations require us to support our position with reliable evidence, but in a scientific discussion, it is mandatory. Proof and the verification of data constitute the essence of any scientific investigation and student researchers

cannot do without them either. After all, evidence is all that counts in any scientific investigation and the best argument is the data itself. It is also advisable to know your audience and be informed about their possible expectations, what they consider acceptable and how would they react to a different point of view.

In addition to facts, every student researcher must ensure that their system of argument is free from logical *fallacies*. Errors, inaccuracies, or logical gaps in any argumentation will lead inevitably to defeat. There are three main types of logical fallacies which should be avoided, and these can be easily identified even by beginner researchers: a) the assumption that correlation is equivalent to causation. Just because something has appeared before does not necessarily mean that it could also be the cause of something that later follows it. While there is evidence that smoking increases the chance for lung cancer, for example, there is no scientific evidence that increased use of mobile phones contribute to brain tumours. b) another type of fallacy is when an argument is supported by the statement that because there is no evidence for something, the given thing, phenomenon or concept, etc., does not exist. For example, the argument that life on other planets does not exist because we have not yet discovered it belongs within this category. c) finally, when there is no evident relationship between an argument and its conclusion, we again face a type of logical fallacy. For example, the conclusion that we should not help the homeless because studies show that there are already many underpaid jobs in the city belongs into this category.

It can easily happen during a discussion that we are forced to admit that our stance was not correct or that we have made a mistake during data collection or during the setting up of the methodology of research. Even experienced researchers can make mistakes or misinterpret some data. It is

better to admit your mistake and subsequently make corrections than to stubbornly fight on in an attempt to preserve our prestige. Accepting that we can be vulnerable is better than shaming another person. Even saying that you are sorry does not mean that your career is going to end on the spot.

Naturally, there is a whole list of psychological tricks that can help you win an argument, but if we take our initial ethical considerations seriously, we should not apply them in a scientific argument. Psychological manipulation of your colleagues is not in compliance with the written and unwritten codes of conduct of the scientific community.

Language study

During scientific arguments we are often required to speak about problems and their solutions, the advantages and disadvantages of something, or are simply required to give our reasons for believing something.

1. Try to clearly define the difference between these synonyms: *problem, issue, and difficulty*. Are these words interchangeable?

2. Which of the following expressions mean *problem*?
trouble, complication, remedy, setback, panacea, obstacle, fix, pitfall, dilemma, vicious circle, magic bullet

3. Study the words below and create two groups by putting every word which is a synonym of the word *advantage* in one group and the words which mean *disadvantage* in the other.

drawback, benefit, merit, downside, bad point, the beauty of something,

4. Study the use of the following synonyms for the word *reason*. Try to write examples of sentences with them to practice their usage:

explanation, motive, grounds, argument, rationale, justification, basis, pretext, excuse

5. Prepare a short speech of three to five minutes. Please note that an average person uses 130 words in a one-minute-long speech and therefore your speech should be from between 390 to 650 words.

Sample speech:

TRUTH AND BEAUTY

The main objective of this talk is to explain how cultural relativism has contributed to the cultural evolution of the western world during the second half of the twentieth century and how it enabled and also caused a departure from the classical definitions of truth and beauty.

People have always tried to find out as much as possible about themselves and about the world they live in. Searching for truth, however, has inevitably led to the division and polarization of society for at least one reason: individually, we are able to grasp reality (truth) only partially and our view is influenced and distorted by many factors such as language, education, knowledge, and judgement about the world, experience, expectations of our community in which we live, and by our prejudices, just to name a few. Because of this distortion, many scientists believe that objective truth cannot exist and that whatever we investigate our language will determine the quantity and the quality of knowledge that we can accumulate. This worldview is primarily applicable to social sciences and the arts and is the construct of postmodernism. In the postmodern world, the concept of truth is replaced by alternatives: opinions, viewpoints, beliefs, perspectives, etc. What is more, people often select only those facts that support their view and deliberately or unconsciously ignore evidence that does not fit in their world view. Unfortunately, science is no exception.

It is possible to grasp a manifestation of the relativist world in our attitude to the concept of beauty. Until the end of the 19th century, our understanding of art was based on the premise that it exists to bring and celebrate beauty in our world. This concept of beauty was not primarily understood as a physical quality, but rather as a manifestation of the

Platonic concept. Beauty belonged in the same realm as truth, justice, or good. This concept was also adopted by the theologians of the medieval times and did not cease to exist until the end of the first World War. Beauty, manifested in different artifacts, architecture, music, poetry, or drama served as remedy from the pains and sorrows of everyday life and was used to celebrate something higher and nobler. In Scruton's words "through the pursuit of beauty we shape the world as our home and we also come to understand our own nature as spiritual beings" (Scruton, 2009, p.n.a.). R. G. Collingwood (1958) also recognized that beauty was able to provide us with amusement and distraction, but he also underlined that this aspect of art is secondary and that the best art, the art that matters, is the stuff that changes the way we interact with the world in a better way.

The great technological and social changes at the beginning of the twentieth century and the unprecedented, industrial-scale destruction wrought during the First World War affected the fabric of western society so deeply that scepticism in classical values and the questioning of their validity started to dominate the cultural realm. The post-World War II world witnessed an escalation of postmodern scepticism. Artists turned away from classical artisanship and craft and instead of depicting the ideal in the real showed the brutality of reality. Usefulness in architecture and the ugly in art became dominant and the gentle mist of beauty evaporated in the heat of consumerism that reduced beauty to pure means for enhanced advertising and income generator.

The relativist world view about truth and beauty resulted in nihilism and suggested that the foundations of aesthetics are subjective and depend only on the attitudes and expectations of the observer. It is undeniable, however, that what humans predominantly find beautiful and pleasing has very objective foundations and it is possible to describe this even in the abstract language of mathematics. The golden ratio seems to be (one of) the universal and objective factors which determines whether we find something pleasing or not.

In summary, though it is evident that postmodern thinkers have contributed greatly to the development of culture in the second half of the twentieth century, their final conclusions have become obsolete and have lost validity by having navigated mankind into a cultural dead-end. A dialectic model is required to make the next step and allow a more open dialogue between the classical and the postmodern – the thesis and its antithesis. A new explanation of truth and beauty may give way to new theories that will have the strength and potential to revitalise culture.

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5.2 Academic writing: Presenting results

“PhD candidates in the humanities make more modest scholarly discoveries: a new way to interpret and understand a classic text, the attribution of a manuscript that illuminates an author’s biography, a reassessment of secondary studies that ripens ideas once wandering lost in various other texts. In any case, the scholar must produce a work that, in theory, other scholars in the field should not ignore, because it says something new.”
Umberto Eco

The process of writing is intrinsically linked to the research process. Although the sequencing of individual sections of an academic text that documents a specific investigation, for instance, a thesis, may differ from the order of items in a working research outline, the investigation follows common principles of research organisation.

All research is divided into stages and it is important to plan the process of exploration, taking into account the time frame, scope of study, the expected length of the completed text, the specificity of selected research problem, the chosen theoretical framework and the expected research outcomes.

Particular attention should be paid to the presentation of the research findings and the synthesis of existing research outcomes with the results of the analysis performed.

Glossary of concepts

OPINION IN RESEARCH

The *SAGE Encyclopaedia of Survey Research Methods* states that “[o]pinions in survey research can be defined as subjective attitudes, beliefs, or judgments that reflect matters of personal (subjective) preference. Some opinions may not be confirmable or deniable by factual evidence (e.g., a person's attitude toward the use of capital punishment), whereas others may be (e.g., the belief that a particular presidential candidate will be elected)” ... “The term opinion is often used interchangeably with attitude and belief, but opinions are a broader category that includes both attitudes and beliefs” (<https://methods.sagepub.com/reference/encyclopedia-of-survey-research-methods/n353.xml>)

RESEARCH BIAS

Bias is defined by the online *Oxford Dictionary* as “an inclination or prejudice for or against one person or group, especially in a way considered to be unfair” ... “a concentration on an interest in one particular area or subject” ... “a systematic distortion of statistical results due to a factor not allowed for in their derivation” (<http://www.oxforddictionaries.com>).

RESEARCH OBJECTIVITY

According to the *Stanford Encyclopedia of Philosophy*, “[s]cientific objectivity is a property of various aspects of science. It expresses the idea that scientific claims, methods, results—and scientists themselves—are not, or should not be, influenced by particular perspectives, value judgments, community bias or personal interests, to name a few relevant factors. Objectivity is often considered to be an ideal for scientific inquiry, a good reason for valuing scientific knowledge, and the basis of the authority of science in society” (<https://plato.stanford.edu/entries/scientific-objectivity/>)

SCIENTIFIC VERIFIABILITY

Verifiability of research is one of the elementary scientific principles. *Encyclopaedia Britannica* defines the verifiability principle as “a philosophical doctrine fundamental to the school of Logical Positivism holding that a statement is meaningful only if it is either empirically verifiable” ... “the principle discards as meaningless the metaphysical statements of traditional philosophy as well as other kinds of statements—such as ethical, aesthetic, or religious principles—asserted as true but neither tautological nor known from experience” (<https://www.britannica.com/topic/verifiability-principle>).

Theoretical background

The content of an academic writing genre such as a thesis documents the performed process of academic inquiry. As has already been stated above, the requirements of academic writing are based on the features of investigation. In the most general terms, while the literature review documents the conceptual, theoretical part of research, the existing knowledge methodological section deals with the approaches, methods and techniques selected for the examination of the primary materials; it contains a description of the processes to be used in order to acquire the research data. The analysis proper carries out the defined research aims, answers the formulated research questions and verifies the hypothesis. The final conclusions describe the implications of the research findings and outcomes for academic theory and outlines potential future research aims in the study area and future practices.

Numerous sources define principles of scientific inquiry with greater or lesser degrees of specificity (cf. Wilson, 1952; Medawar, 1979; Hawking

1988; Janigová, 2000; Chang 2014). Among the most general principles that apply to all research fields (and which are usually called fundamental or epistemological) one can list the following:

1. The quest for conceptual (theoretical) understanding; linking the research topic to a relevant theory

2. Definition of a research claim (hypothesis) and research questions that can be investigated empirically

3. The selection of methods that allow for the complexity as well as specificity of investigation

4. The application of logical reasoning, argumentation, analysis, synthesis and generalisation

5. The coherent documentation of research findings which can be made available to the research community

6. Ethical conduct in the investigation and documentation of research. All of these principles emphasise creativity, objectivity and open-mindedness at all stages of the scientific investigation and its documentation.

Scientific inquiry is usually divided into several stages and they can be grouped into four basic phases of research. If applied in the thesis investigation, they can be framed as follows:

1. Research planning:

Time-line and strategy of research, choice of topic, preliminary thesis outline

2. Preliminary research:

Bibliographic research, the compilation of a working bibliography, extensive reading

3. Research proper:

A critical assessment of secondary sources, the selection of a methodological framework of theories, methods and techniques, the selection of primary sources, the analysis of primary sources, obtaining findings

4. Documentation of the research outcomes; i.e., writing the thesis.

The academic writing process follows these phases and the projected research plan.

The first two phases of research and their reproduction in academic writing procedures have already been discussed in the chapters above. The documentation of the actual research, i.e., the analytical sections of the thesis, includes a complex description of the collected data, an analysis of the data and other procedures which are intended to respect the research aims, attempt to answer the research questions and test the hypothesis.

The empirically supported findings which have been obtained are then placed into the context of the relevant theoretical knowledge within the field of study as mapped in the theoretical framework; this is then synthesised with the existing knowledge in the field and generalised into conclusions. The scope of the research limits the level of the generalisation of findings and their applicability. The implications of the findings can be combined with the theory used in the investigation; i.e., with the existing knowledge in the studied field (the enrichment of secondary sources), with the knowledge about the analysed phenomenon, i.e., with primary material (the criticism of primary sources), and with practice of humanity (guidelines for practical applications).

Academic writing mechanics

Researchers not only design their research projects, but they also follow standard academic writing strategies in planning their own written documentation of the investigation.

The writing process is divided into four elementary stages (cf. Harmer, 2004):

1. Planning – taking into consideration the purpose of writing, potential readership and the content structure
2. Drafting – using existing notes and texts and creating the first version of the academic text
3. Editing – modifying, rewriting, revising the first draft
4. Final version – finalising the text for publication.

The writing procedure is usually combined with the research procedure and typically follows the path listed below (cf. Bailey, 2003):

1. Understanding the field, choosing a topic, learning about specific academic writing genre requirements
2. Assessment of secondary sources – selection of most appropriate sources
3. Selection of relevant texts – keep records of sources for references
4. Taking notes on relevant areas, using citations, paraphrasing and summarising
5. Selecting an appropriate structure for the thesis – final thesis outline
6. Organising and writing the main body of the text
7. Organising and writing the introduction
8. Organising and writing the conclusion

9. Finalising the bibliography

10. Critically reading and re-writing the text where necessary; final proof-reading.

Study questions

1. Discuss the type of research performed within the area of your study field, identify its specifics and its contribution to the research in humanities, arts and social sciences. Place your own thesis investigation into the broader perspective and outline its potential contribution and applications. How do they correspond with what Eco says about the research in humanities in the quote at the beginning of this subchapter?

2. Identify your potential research biases and formulate the measures you can take in order to avoid them influencing your thesis research and writing in order to keep your research and writing as objective as possible.

3. At which stage of your thesis research and thesis writing are you currently? Describe the previous stages and collect and share positive experiences and problematic issues. Discuss the subsequent stages and identify any possible problems you may need to tackle.

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CHAPTER 6 COMPOSITION OF THE TEXT

6.1 Academic speaking: Making speech stronger

Student researchers must remember that a scientific community requires them to be well-informed about the current state of the art in the branch of science in which they are conducting their research activities. Personal opinions are insignificant in scientific arguments. Facts and reliable data only count if they have been obtained from verifiable experiments and through acceptable methodologies and if they can stand the test of the scientific community in every aspect. References to reliable sources are key to the success of a research project and student researchers are expected to know how to cite different sources correctly in their speeches.

Plagiarism is a serious issue and student researchers are obliged to avoid infringement of copyright laws. Therefore, the use of clear references for sources is a strict requirement for them. There are, however, some differences when we use citations in a text or when we are referring to a source in speech. Regardless of these differences, researchers must follow laws, regulations and codes of ethical conduct in order to avoid plagiarism.

Of course, it is important to underline the fact that copyright laws – the protection of intellectual property – also provide protection for everybody who creates original works including publications in scientific journals and this is a clear benefit for every researcher. If your work is frequently cited, this can bring not only certain financial benefits, but also puts the authors in a prestigious position when colleagues and fellow researchers express their appreciation and respect for their achievements and make frequent references to their publications in their own work.

Glossary of concepts

PLAGIARISM

The act of taking someone else's work and using it as if it was your own product; also, the failure to acknowledge the authorship of a physical or legal person in any form of intellectual product.

SELF-PLAGIARISM

The repeated use of certain passages of one's own text without clearly marking the original source.

INTELLECTUAL PROPERTY

The non-physical property of a legal or physical person which has come into existence through creative work and which falls under copyright protection.

CITATION

The word-by-word quotation of a passage of a text from a source.

PARAPHRASING

A shortened version of a thought developed by an external source that is used as a reference.

QUOTE

The act of using the exact same thoughts of an external source in one's own work.

Theoretical background

Citations and references can make your speech stronger and add credibility to your arguments. The sequence of the works cited in your academic writing can also provide your audience with information about your approach to the investigated problem and your steps in developing and applying the methodology of research. Moreover, in a scientific community,

researchers must make clear to their colleagues that they are an educated and informed member of the team by using references from the most reliable sources and from reputable authors who have made significant contributions to the actual state of art in the given branch of science. In addition to demonstrating that they are well-informed, student researchers can also use citations to give credit to fellow researchers whose work they respect and highlight their contribution to their own research by citing them in their speech. Thus, citations and references constitute an extremely important part of any scientific presentation and must be formulated correctly and, above all, be in accordance with the legal requirements in force to protect the intellectual property of the original authors.

Speeches have oral citations which denote a verbal reference made to a source, a piece of research, or to any other material that is protected by copyright and which falls within the category of the intellectual property of a physical or legal person. Citations and references made in speeches differ from citations made in academic papers. While it is customary in the written form to provide the reader with the name – typically only the surname – of the author, the date of publication, and the page number, oral citations usually provide a wider scale of information about the author cited.

When citing an author in a speech, the speaker is required to include the full title of the work, with the full name of the author and the date when the piece of work was published. If the author is widely known, and the piece of work is a frequently cited book, monograph, or journal article the reference can be shorter – the surname and the title is often sufficient. On the other hand, when the author is less well known in the scientific community, the reference should be more exhaustive including: the full name of the author, his/her affiliation, their membership in scientific

research groups, or possible awards and notable achievement, which can add to the credibility of the cited person. If this is not possible because these credentials are not accessible, the minimum requirement is to cite the full name of the author and the full title of the article.

Plagiarism is a problem that not only discredits the work of any scientist, but which can even ruin entire careers. As the growing number of plagiarism scandals show, the problem is a permanent concern. A failure to acknowledge that the ideas and phrases used in a publication were obtained from the work of another physical or legal person are not uncommon even in science and research. This is a serious breach of copyright laws which violates the rights of the owners to protect their intellectual property. On the other hand, “If only thoughts are duplicated, expressed in different words, there is no breach of contract. Also, there is no breach if it can be proved that the duplicated wordage was arrived at independently” (Encyclopædia Britannica, 2015, p.n.a.).

There is however another – possibly less well-known – form of plagiarism: self-plagiarism. Student researchers should be prudent when using their own texts as references and must avoid ‘recycling’ texts in order to save time, for instance. This type of plagiarism can be equally damaging.

Paraphrasing a text is not a citation but it can nonetheless constitute a breach of copyright laws and can be considered as plagiarism when applied incorrectly. Scientists usually paraphrase other sources to shorten and clarify information gained from the given sources. Paraphrasing must also be highlighted in oral presentations in a similar manner to that of citations and the reference to the external sources must be clear and straightforward.

In oral presentations, it is also possible to explicitly mark the beginning and the end of a cited sentence. Some speakers do it by adding the word *quote* before the cited sentence and the word *unquote* or *close quote* at the end of the citation. However, this type of citation does not sound natural and is not preferred by many speakers. The webpage of Worcester Polytechnic Institute suggests “Do not say, “quote, unquote” when you offer a direct quotation. Use brief pauses instead” (Worcester Polytechnic Institute, 2020, p.n.a.).

Scientists sometimes use copyrighted material such as videos, recordings or other multimedia products in their analyses or presentations. When doing so, presenters must provide a full citation. The presenter should also ask for the permission of the copyright owner.

The bottom line is that the basic requirement for any presenter is to provide sufficient information about the source of the citation for the audience so that they will be able to find it easily and reliably. A second requirement is that the audience must be provided with background information about a source which may be unknown to them. In a scientific presentation we generally start with qualifications of the source and continue with his/her surname.

One can conclude that citing and paraphrasing are a sensitive and highly important part of scientific presentations. When correctly applied, citations can add credibility to your work and provide your audience with the necessary information to understand your work, approach, and methodology. Paraphrasing can also contribute to the clarity and logical coherence of your speech.

Language study

Quoting and referencing require specialized vocabulary. Study the following examples carefully.

1. Translate and write example sentences with the following expressions: *as ... points out, as ... notes, as ... states, as ... remarks, ... observes that, ... argues that, ... claims that, according to ..., in the words of...*

2. Study the following examples and select the words that are synonyms of the expression *conclude*
deduce, reduce, infer, comment, judge, believe, assume, intend, presume, suppose.

3. We can also make references using a series of expressions. Analyse the following expressions and try to create examples of sentences with them. We use the following expressions to refer to an earlier part of the speech:

the above..., the previous ..., the preceding part, as was mentioned earlier, as has been seen/demonstrated.

We use the following expressions to refer to a later part of the speech:
the following example, as follows, there follows, as we shall see

4. Prepare a short speech of three to five minutes. Please note that an average person uses 130 words in a one-minute-long speech, and therefore your speech should be between 390 and 650 words.

Sample speech:

GOD AND EVOLUTION

God – the word has been used for centuries to describe a conscious entity that exists simultaneously beyond and within the physical world. God has an endless number of attributes; he is omnipresent, omnipotent, and eternally good in the western cultural realm. The goodness of God is manifested in the creation – bringing the entire visible and invisible world into existence. The objective of this presentation is to offer a possible explanation of how creation and evolution – two seemingly mutually exclusive concepts – can coexist and complement our understanding of reality.

Contemporary cosmology accepts that our universe came into existence 13.8 billion years ago during a physical process which – in a greatly simplified way – is named the Big Bang. This model suggests that the whole universe expanded from a single extremely dense and hot concentration of all matter and energy at a huge speed (Gamow, 1952). A second powerful scientific theory in biology – the theory of evolution – postulates that all living organisms on Earth today “have their origin in other preexisting types and that the distinguishable differences are due to modifications in successive generations” (Encyclopædia Britannica, 2015, p.n.a.). These models offer scientifically well-grounded explanations for a wide range of phenomena which are observable in the universe and on Earth but cannot provide any answer to the question of why it happened.

Let us assume and allow for a second that God exists. The fundamental characteristic of God would be perfectness. This means that God alone contains and represents everything – i.e., every possible aspect of existence. The Biblical phrase ‘I am that I am’ expresses this essential state. The controversial consequence of such an existence is that God must necessarily be alone because an eternal and perfect entity contains and represents everything possible. Thus, God does not experience his own existence as an objective reality because for that he would need to see himself from outside his own boundaries – which, once again, do not exist. God’s desire to experience himself is manifested in creation.

God is eternal, limitless, and endless. This, however, is not possible to claim about the physical world with absolute certainty. In a recent study, *Planck evidence for a closed Universe and a possible crisis for cosmology* published in 2019 in the Nature Astronomy magazine by Eleonora Di Valentino, Alessandro Melichiorri, and Joseph Silk, the scientists suggest that the universe might be finite (Di Valentino, Melichiorri and Silk, 2019). In such a cosmos, evolution is not contradictory to creation but is instead a necessity. The infinite God, who contains every possibility of existence is infinitely greater than a universe

which is vast but finite. The interaction between the infinite God and the finite universe – in which God continuously manifests himself – necessarily leads to evolution because matter must continuously transform from one organization into another one to reflect the different attributes of its creator. In order to transform from one type of organization to the next one, matter needs time. If we accept this argument, we can also admit that evolution is not only an adaptation to changing physical circumstances, but also a targeted process towards a goal – to achieve a new, different organization of matter that is capable of reflecting different attributes of the creator.

In summary, scientific theories are powerful tools in understanding the natural processes that have led to the existence of the present state of reality. They are unable, however, to provide satisfactory answers to the question why our world came into existence. If we assume the existence of a creator who created the universe to reflect to himself and to experience all possible manifestations of his perfectness, we can obtain a more comprehensible explanation of existence and reality.

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6.2 Academic writing: Citing and paraphrasing

“Therefore, practically speaking, there are two kinds of quotes:

(a) quotes from a text that you will interpret;

(b) quotes from a text that you will use
to support your interpretation.

It is difficult to say abstractly whether
you should quote abundantly or sparingly.

It depends on the type of thesis you are writing.

A critical analysis of a writer obviously requires that
large passages of his works be quoted and analyzed.

In other cases, a quote can be a manifestation of laziness,
for example if the candidate is unwilling or unable
to summarize a collection of data and
prefers to let someone else do it for him.”

Umberto Eco

Research and academic writing that documents the investigation relies to a great extent on the study, critical assessment, use and acknowledgement of already existing ideas, theories, methods, techniques, data, results or outcomes that have already been discovered and published.

The use of whole texts or their parts of texts produced by other authors must follow rules that respect the principles of academic integrity and academic honesty. Ignorance of these rules, whether intentional or caused by an irresponsible approach, can result in accusations of plagiarism.

Every author documenting his/her research in any genre of academic writing has to acknowledge the use of other authors' work and include complete information about the works used in their lists of works cited (or referenced) or in their bibliographies.

Glossary of concepts

ACADEMIC INTEGRITY

The authors of the academic writing rules produced for the Writing Centre of the University of Carolina at Chapel Hill define academic integrity as “the commitment to and demonstration of honest and moral behavior in an academic setting. This is most relevant at the university level as it relates to providing credit to other people when using their ideas. In simplest terms, it requires acknowledging the contributions of other people. Failure to provide such acknowledgement is considered plagiarism (<https://writingcenter.unc.edu/esl/resources/academic-integrity/>).

ACADEMIC MODESTY

There are two essential elements of academic modesty: 1. An author’s academic work should be praised (described as useful, interesting, valuable) by readers not by the author themselves; 2. The author of an academic text should understand and acknowledge the limitations of their work.

Theoretical background

Quoting and paraphrasing other sources is a common and indispensable practice in academia in both spoken forms of research reporting and in academic writing genres. In both modes it is necessary to acknowledge these ‘intellectual borrowings’ and for the author to be academically honest.

Respecting elementary ethical principles in academic work is one of the signs of personal and intellectual maturity. Any failure to respect research ethics is a serious offence. In many countries this is considered an act of unethical and even unlawful behaviour and may result in serious consequences, not only at academic level through, for example, fail grades in coursework, disqualification or expulsion, but it can also become a legal

issue when identified as a copyright infringement.

Quoting and paraphrasing other authors' ideas and their acknowledgement increase an author's credibility and the trustworthiness of their claims. Supporting one's own statements with similar research outcomes or probing these outcomes serves as a proof of the author's familiarity with the research field, their existing knowledge and ability to assess and evaluate existing theories, data or results. Ignorance of other scholars' existing works may cause damage to an author's credibility.

The practice of quoting and paraphrasing other sources is also beneficial for potential readers of academic works. Researchers are constantly searching for new relevant sources and finding them assessed and placed into the context of new research makes the research and its documentation very useful for readers.

There are three basic ways of using other authors' ideas, and they have already been mentioned several times in the text above. Citation or quotation is the word-by-word copying of an original text with the purpose of documenting the information, idea or data before it is scrutinised. Any modification of the original text, however minor, for example, added emphasis, changes in capitalisation or corrected mistakes, must be properly marked in the quotation in order to make the changes apparent to the reader. The modifications are usually made through the use of symbols, e.g. [], italics, phrase 'emphasis by the author', etc.

Paraphrasing is the technique of expressing the meaning of the original text using different words; i.e., the words of the author of academic writing genre. The purpose of a paraphrase is to simplify the idea, to make it clearer, or to adopt it for a different purpose than that for which it was originally intended.

There are two main types of paraphrasing. The first is the paraphrasing of a relatively short section of an original text. An author takes an original idea of a couple of lines of the original text and transfers it into their own words. The second type of paraphrasing is paraphrasing by summarisation. In this process the author summarises a larger portion, often of several pages, of the original text and provides a short account of the ideas contained in the text.

The rules for the limits of quotations in a text vary widely depending on the genre of an academic writing as well as the specific rules of the publisher. In general terms, it is more acceptable to include more paraphrases than to flood the text with extensive citations. Moreover, the ability to paraphrase not only proves that the author has an understanding of the original text, but also demonstrates the author's academic skills in analysis and synthesis.

All three types of intellectual borrowings contribute to a composition of an academic text and in English-speaking academia, the use of a wide range of primary and secondary sources is an essential requirement. Citations and paraphrases are typically more frequently used in the literature survey and methodological sections of a thesis than in the analytical part.

As was stated above, any failure to acknowledge the use of the work or ideas of other authors' qualifies as plagiarism. The origin of the word 'plagiarism' goes back to the Latin word 'plagiarius' which means 'kidnapper' (Gibaldi, 2004, p. 26).

Plagiarism is easily detected by either reviewers, proof-readers, editors, or by computer software designed and used for this very purpose. Authors of theses often do not realise that academic writing in a foreign language makes plagiarism much more easily detectable.

There are several degrees or types of plagiarism (cf. Perez Canado and Pennock-Speck, 2015, p. 48):

1. Word for word plagiarism – the reproduction of an original text or a quotation without acknowledgement of the source.
2. Mosaic plagiarism – the modified reproduction of an original text in which some parts of the text are kept in the original form and some parts are replaced with different words.
3. Plagiarism by paraphrase – the paraphrase of an original text without acknowledgement of the original.
4. Substantial paraphrasing with some of the sources unacknowledged.
5. Use of an author’s previously published text without acknowledgement of the previous publication, also termed self-plagiarism.

Academic writing mechanics

Intellectual borrowings – citations or quotations and paraphrases should become an integral part of the body of the text and their location in the text is thus guided by the function which they perform in the text, for instance, proving an author’s statement or providing an opposite opinion. The justification for their inclusion in the text is usually provided as an introduction and their purpose or functions are discussed subsequently. Consequently, the text of a quotation or a paraphrase does not stand on its own separated from the rest of the text. Moreover, their presence has to be marked in the text and the source has to be included in the list of works cited, i.e., a list of references and/or in the bibliography.

A short citation, also called an in-text citation, is usually shorter than three lines and is placed in the body of the text, marked by double inverted

commas and followed by a reference in round brackets containing the author's surname, year of publication and the relevant page number.

Longer quotations, so called indented quotations, are separated from the rest of the text by one line at the top and at the bottom, indented, in a smaller font; this type of quotation is not typically marked by double quotation marks, but they are followed by the same referencing format used for short citations.

Paraphrases are always placed into the text; they are never indented and their beginning has to be marked by an introductory text. Their end is marked by a reference in round brackets with the surname of the author, year of publication and, in relevant cases, a page number.

A complete reference, or full bibliographical information, has to be provided in the list of works cited (list of references, references) or bibliography or both. It is also possible to include complete references into footnotes and more often into endnotes although this is not a common practice for theses.

Several standard referencing systems are used, the most common of which are the Harvard System (author-date system), Modern Language Association of America (MLA System), American Psychological Association (APA System), Modern Humanities Research Association (MHRA System) and the Chicago System. Many publishing houses and universities have their own referencing systems, while others have adopted one of the above listed standard systems. Referencing systems not only contain rules about references but also about technical issues of text editing, such as typographical specifications and other aspects of text formatting.

The bibliography in a thesis is usually divided into two sections, the primary sources and the secondary sources. Some academic writing genres

may require an annotated bibliography that contains of all standard bibliographic information but also provides short descriptions, summaries or evaluations.

Study questions

1. In the text quoted from Eco at the beginning of this sub-chapter identify the types of quotations he describes and match them with the characteristics of quotations provided in the Theoretical Background section above. Which of the quotations do you expect to use most in your own thesis writing? Discuss Eco's criticism of the purposes of quoting.

2. Find documents issued by the university where you study that are related to academic integrity. Compare them with similar documents found on websites of American or British universities.

3. Identify the referencing style which your own university requires for theses. Do they require one of the standard referencing styles or it is a specific university publishing house style? Are any requirements set for the formatting of the thesis? Find a template for the formatting of the thesis.

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CHAPTER 7 DEVELOPMENT AND EVALUATION

7.1 Academic speaking: Why does style matter?

Academic speaking is very similar to academic writing in style, and academic style therefore has specific recognizable features that should also be followed in spoken formats. Student researchers should recognize these features and be able to use them when developing their own speeches.

Academic speaking differs from everyday communication through its emphasis on the precise use of technical terms. Academic discussions take place in a formal setting and speakers are required to adjust their style, primarily the choice of vocabulary, to the situation. As with academic papers, academic presentations also concentrate on one central topic and usually discuss one precisely defined problem. Scientists work with data and use rigorous methods for argumentation in their presentations which means that they are fully responsible for what they say and how they say it.

It is always the speaker's responsibility to present information coherently, to provide satisfactory arguments for the audience to support his or her claims and to provide evidence and justification. Academic style is one of the most rigorous styles used for presentations and as such provides little room for creativity. Its main objective is the effective and reliable communication of information to the scientific community.

Glossary of concepts

STYLE

The distinctive manner in which a specific speech is performed. In our case it is *not* the method of delivery, but rather the quality of the speech act.

FORMALITY

The choice of grammar patterns and vocabulary determines the level of formality of any speech act.

WORDINESS

A stylistic error when too many words are used to express something, often resulting in repetition.

ACADEMIC VOCABULARY

A special set of vocabulary specifically used in academic papers and academic speeches that contains a lot of very formal and technical terms.

CORPUS

A large collection or database of texts which can be analysed by special software to discover or validate linguistic rules.

HEDGE

A technique of using words that protect the speaker from the need to acknowledge or commit to a certain assumption or inference.

Theoretical background

In this chapter, certain features of academic spoken English are discussed in detail. Student researchers are required to recognize these stylistic features and incorporate them into their speeches in order to meet academic style requirements.

Spoken academic language is characterized by a high level of formality. Even though the style of spoken language is not as rigid as that of written language, speakers are required to avoid colloquial expressions and phrasal verbs. Formal speeches are characterized by more carefully chosen grammatical structures and a conservative selection of vocabulary. As far as grammar is concerned one distinctive feature of formal speeches

is the use of the passive voice. The passive voice is primarily used to avoid speaking about the actor in the sentence when the actor is either irrelevant or unknown. When a speaker makes a statement which is considered as generally true, the passive voice also can be used. The passive voice is very commonly used in the section of a scientific speech termed as lab reports, primarily in the Materials and Methods section (remember IMRaD), to describe processes. It is, however, always the responsibility of the presenter to choose the appropriate grammar and it is advisable to avoid the use of the passive voice if it might result in ambiguities.

When information about *who* is responsible for something is required, the passive voice should be avoided. *Wordiness* can also be a problem when a speaker uses the passive voice too frequently during the presentation. Sometimes less is more and student researchers should remember that, however much the passive voice might be preferred in academic style, the use of the active voice is *not forbidden*.

In addition to grammar, the choice of vocabulary is the second factor that determines style. As has already been emphasized above, academic style requires the use of formal words and within this domain a special subgroup also exists: *academic vocabulary*. Corpus analysis and large-scale data processing technology allowed researchers to build databases of expressions which are excessively used in scientific communication. These word lists can be extremely useful in developing academic papers as well as for improving academic speeches because they offer the overwhelming majority of expressions that regularly appear in academic papers.

Academic presentations – such as academic discussions – are often hedged. This means that the speakers use caution when selecting expressions. A hedge – used as a noun – is a cautious, vague, or evasive

statement, while the verb, ‘to hedge’, means that the speaker is unwilling or unable to give a clear and open answer to a specific question. When speakers are hedging, they are trying to avoid committing themselves to a concrete decision, action or confirmation. They can do this for various reasons; for example, to avoid unpleasant conclusions, to downplay some negative statement, or to signal that they disagree with certain suggestions. It is also applied when the speaker is hesitant or uncertain about something.

A further difference between written and spoken language is their level of complexity. Academic articles are often long, complicated texts packed with professional terms used in formal constructions. Although academic speech also requires a certain degree of formality, it is not comparable with academic writing in terms of the complexity of its sentences. One reason for this is that whereas a written text is always available for re-reading, a speech is transitory. The audience should be able to grasp the message immediately. Spoken language also provides the listener with extra information in the case of a scientific presentation because the gestures, the body language, the pitch of the voice of the speaker, or such elements as intonation stress and rhythm can reveal a lot about the intentions or stance of the presenter.

Academic speeches are not improvised performances. Speakers prepare the speech beforehand and a text that is prepared for an academic article is often not too different from a text which is used for presenting the same article before an audience. Because these speeches are distinct from everyday speaking style, they should be rehearsed several times before the presentation itself; some speakers even choose to memorize their speeches. If time allows, learning the speech by heart is also a good idea for student researchers as it has certain advantages: it makes the speaker more confident and can help to manage stress before the actual performance; it also helps

student scientists to acquire scientific terminology and academic words more quickly. It is true that the memorization of a text has some drawbacks too. It is almost certain that the actual delivery of the speech will cause stress and in certain situations it can block the speaker's memory. A blackout can only be overcome when the speaker is creative and flexible and is able to overcome the tension which arises from the stressful situation.

Academic speeches are organized performances, and if the speaker is aware of the stylistic requirements of the different academic papers, the logic of the presentation is easily acquired. Fortanet suggests a classification of spoken academic discourses: classroom genres, institutional genres, and research genres. Research genres can also be divided into two subgroups: conference genres and other research genres (Fortanet, 2005). Classroom genres can be further classified according to their purpose as: lectures, seminars, tutorial interviews, students' presentations and oral exams. Institutional genres include speeches which are performed at celebrations and formal events during the academic year: academic year opening lectures, commencement addresses, Honoris Causa speeches, prize acceptance speeches, President's or Rector's addresses to the faculty or memorial services for recently departed professors. Finally, conference genres include plenary lectures, paper presentations, poster presentations, workshops and research meetings. Research genres also include PhD. defences, Master thesis presentations and research projects.

Language study

1. In the following list, mark the expressions that mean *agreeing*:
share somebody's concern, take issue with, subscribe to a view, dispute, is of the same opinion, concur.

2. Collect synonyms for the word *disagree*.

3. The following list is a collection of words and expressions that are used to *give opinions*. Use the expressions and create examples of sentences using them: *in my view, it seems to me that, I believe that, I am of the opinion that, I take the view that, we hold the same opinion, for me..., as far as I am concerned, from my point of view*.

4. When speakers are certain of something, they can use one of the following expressions: *I am certain/ sure/ convinced/ confident/ satisfied..., I have no doubt, I am in no doubt that..., without a doubt, there is no doubt that, certainly/undoubtedly, most certainly*

5. Prepare a short speech of three to five minutes. Please note that an average person uses 130 words in a one-minute-long speech, and therefore your speech should be between 390 to 650 words.

Example speech:

MORALS, LAW, FREEDOM AND JUSTICE

Let us talk about freedom and morals for a while. One might claim that these two concepts are contradictory and, in some cases, even mutually exclusive. In my talk, I would like to demonstrate that they are rather complementary and can only exist together.

Firstly, we need to clarify our definition of freedom. Freedom or individual liberty can be described as the condition of a person in which he or she can act without the control of another person, group of people, or any other real or imaginary authority. This is an idealized state and complete, unlimited freedom of the individual would only be possible if one could exist outside society – completely isolated from the world.

I will argue that personal freedom is always the result of a negotiation between a person and the society in which the person lives. Control mechanisms – either external, in the form of laws and regulations, or internal, in the form of moral codes of conduct – are not

only always present but are necessary for the peaceful coexistence of members of any group.

Let us perform a simple thought experiment by imagining a society in which there are absolutely no control mechanisms; neither external legal regulations or laws nor internal ethical norms. A similar society would likely end up in anarchy. Because of the complete lack of external control, anarchy might look tempting, but in a world of limited resources competition among the members will result in certain members of the group being unable to access and accumulate resources by applying brute force or power alliances. Thus, anarchy will inevitably lead to tyranny and the oppression of those who are weaker or who are left out from alliances. The non-violent coexistence of individuals in such a society would only be possible if the individuals were able to make unselfish decisions and if resources were unlimited.

Now, let us imagine a society in which external control of the individuals is almost complete and is exercised over every aspect of a person's life. This type of society is termed totalitarian. Control is exercised by a (minority) group – political, religious, ethnic, social, financial, etc. – which develops institutions to maintain their control. The members of this society are required to obey the rules dictated by the ruling minority in exchange for the means they need for survival.

From the two examples, we see that personal freedom can be exercised only to a certain degree and is limited by two factors: 1) external control manifested in law, and 2) internal control manifested in moral and ethical codes. The actual level of external and internal control in a society is the result of a continuous negotiation between the individual and the members of that given society and is always an 'unfinished project'. Law is a codified set of rules which is rooted in constitutions. Democratic constitutions acknowledge human rights and dignity and apply ethical norms developed on the basis of historical experiences. Throughout law, societies define those areas in which the individuals subordinate themselves to external control in order to achieve peaceful coexistence among the members of the society.

Ethical and moral norms are manifold and many of them are unwritten codes of conduct which are, nonetheless, equally important in managing coexistence. Norms change over time and the norms accepted in one culture often greatly differ from those accepted in a different culture. They are manifested in etiquette, religious traditions and rituals just to name a few.

In conclusion, we can see that codified law and ethical norms are equally important for the coexistence of individuals in a society. In their absence, freedom cannot be maintained because the lack of external control and moral rules inevitably leads to anarchy in which the powerful few oppress the weaker. Too much external control leads to the tyranny of a minority over the majority which is also unacceptable.

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7.2 Academic writing: Why does academic style matter?

“But the language of the thesis is a *metalanguage*, that is, a language that speaks of other languages.”

Umberto Eco

The language of academic writing is a constituent element of academic discourse. The research procedures and outcomes are conveyed and documented through an academic style that may differ across various genres. However, all genres of academic writing follow the same elementary rules and they share the same basic characteristics.

Academic writing genres communicate scientific knowledge and, as such, they use the language of this knowledge. Both authors and their readers share the same communication framework including the content of the academic field and the language used within it.

Theses, and doctoral dissertations in particular, together with scientific journal articles represent the most rigorous genres of academic writing through which researchers publish their investigation results. The rules of academic writing applied in them are thus much stricter than those of other academic writing genres.

Glossary of concepts

ACADEMIC DISCOURSE

According to Patterson and Weideman “[a]cademic discourse, which is historically grounded, includes all lingual activities associated with academia, the output of research being perhaps the most important. The typicality of academic discourse is derived from the (unique) distinction-making activity which is associated with the analytical or logical mode of experience” (Patterson and Weideman, 2013, p. 107).

ARGUMENT

An exchange of opposite opinions that usually contains a series of statements. One of the four elementary rhetorical modes.

DESCRIPTION

A spoken or written explanation of event, object, phenomenon. It is a pattern of narrative development the aim of which is to make the phenomenon 'colourful.' One of the four elementary rhetorical modes.

EXPOSITION

A comprehensive description and explanation of an object, process, event, idea or theory. It provides not only elementary but also background information about the context. One of the four elementary rhetorical modes.

NARRATION

The process of telling or writing a story to an audience with the purpose to convey information in a story to recipients. One of the four elementary rhetorical modes.

REGISTER

Register is defined as a utilisation of language in a particular communicative situation. It is a variety of language used to serve a specific purpose. The level of formality is an aspect of discourse that plays an important role in written communication in particular.

Theoretical background

The discourse of academic writing reflects the ways of thinking shared by its participants, for example, researchers and students; it represents their experience in the field of study and stipulates the use of a particular register. The institutional character of academia, and the research identity of its participants are incorporated in this discourse and its formality.

Research discourse conventions are reflected in the register of academic writing genres that serve not only as a means of documenting an investigation and its outcomes and their publication, but also as granting recognition to the researchers within academia.

According to Weideman, the discourse of academic writing and its register represent complex phenomena that serve various functions. The main tasks of academic discourse are to expose, clarify and conclude and for these functions the register is required to define, explain, classify, compare, contrast, agree, disagree, illustrate, elaborate, claim, infer, imply, exemplify and anticipate. (Weideman, 2018).

There are four elementary modes of the academic discourse, those of narration, description, exposition and argument. The common element of these modes is the position of the author who is located in the background, with the dominant position in the discourse being occupied by ‘ideas’ such as data, information, evidence, processes and results. The author is an invisible actor who reads, selects, collects, proposes, claims, supports and presents the information, but his/her identity remains hidden.

Academic writing mirrors this hidden background position of the author in an elitist, authoritative, impersonal, strictly formal, technical, objective, tentative and unemotional register.

Academic writing mechanics

The elementary characteristics of an academic writing style as being elitist, authoritative, impersonal, strictly formal, technical, objective, tentative and unemotional are manifested in the usage (or rather non-usage) of certain aspects of language.

The identity of the author remains uncovered because characteristics and elements of his/her personal identity, such as age, gender, class, ethnicity, religious identity, ideological affiliation, and many other are not presented in either the content or the form (for example, the use of politically correct language or gender-neutral expression).

The requirement for an objective and impersonal style forbids the use of personal pronouns, such as I, me, my, we, us, our, expressions like ‘I think’, ‘we live’, and forces authors to employ the third person and the passive voice in their sentences. This style is also typically marked by the use of formal vocabulary with a large proportion of technical and specialised terminology and words of Greek and Latin origin.

A high level of formality is also achieved through the usage of complex instead of simple sentences, formal grammar, a reduction in the use of auxiliary verbs and phrasal verbs, and the transformation of direct questions to indirect ones (with the exception of research questions that are usually formulated as direct questions).

Colloquial and idiomatic expressions, metaphors, slang and informal, emotionally-loaded vocabulary such as superlatives, value judgements, rhetorical questions, and also contracted forms (can’t, aren’t, etc.) are strictly forbidden.

The tentativeness of the academic writing style is indicated by the use of specific phrases such as ‘it is suggested’, ‘it is believed’, ‘one expects’, ‘the data show’, ‘this seems to be the case’, ‘it appears to be’, or ‘this is likely to lead to conclusions’, all of which convey a certain degree of objectivity. Adverbs such as ‘possibly’ or ‘probably’ and modal verbs such as ‘may’ or ‘might’ also serve the same function.

Torrance and Galbraith (2006) summarise the functions which every author of a thesis performs during the academic writing process.

1. Monitoring the thematic coherence of the text
2. Searching for and retrieving relevant content
3. Identifying lexical items associated with this content
4. Formulating syntactic structures
5. Inflecting words to give them the necessary morphology
6. Monitoring for appropriate register
7. Ensuring that the intended new text is tied into the immediately preceding text in a way that maintains cohesion
8. Formulating and executing motor plans for keystrokes that will form the text on screen
9. Establishing the extent to which the newly-generated clause or sentence moves the text as a whole nearer the intended goal
10. Revising goals in the light of new ideas cued by the newly-produced text.

Study questions

1. In the text below, Eco criticises the lack of knowledge of academic writing style rules. Discuss his arguments. Is your own knowledge of academic writing register sufficient for writing your thesis?

You are not e. e. cummings. Cummings was an American avant-garde poet who is known for having signed his name with lower-case initials. Naturally he used commas and periods with great thriftiness, he broke his lines into small pieces, and in short he did all the things that an avant-garde poet can and should do. But you are not an avant-garde poet. Not even if your thesis is on avant-garde poetry. If you write a thesis on Caravaggio, are you then a painter? And if you write a thesis on the style of the futurists, please do not write as a futurist writes. This is important advice because nowadays many tend to write 'alternative' theses, in which the rules of critical discourse are not respected. (Eco, 2015, p. 150)

2. Prepare a short, one standard A4 page-long text in which you apply all four elementary rhetorical modes – argument, description, exposition and narration. Use one of the elements of your thesis research topic as the subject of your text. Try to apply the proper register.

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CHAPTER 8 RESEARCH NARRATIVES

8.1 Academic speaking: ‘Victory loves preparation’

By now, a series of requirements placed on academic speakers we have discussed. Fundamentally, there are three main stages that speakers must go through when preparing for their public performance: preparation, organization and development.

The main objective of this chapter can be summarised by the Latin proverb “*Amat Victoria Curam*” (“victory loves preparation”); it is crucial for every student researcher to invest sufficient time and effort in preparation. In this chapter, we will summarise some significant ideas that can boost the preparation process and help inexperienced speakers develop their first speech more effectively. Ideas related to planning, topic selection, and research are discussed in detail. Since scientific speeches and discussions take place in a scientific community and their expectations have already been discussed in the previous chapter, there is no special effort invested in audience analysis, a process which many authors (Sprague and Stuart, 2008) argue is an essential part of preparation.

The main focus is placed on genres which are part of everyday academic discourse: student researchers’ presentations in seminars, oral exams, paper- or poster presentations, small-scale research projects, and the defence of Bachelor or Master theses (Fortanet, 2005).

Glossary of concepts

PROCRASTINATION

The deliberate and useless postponement of an activity or task because of overestimating efficiency vis-à-vis the available time.

TIME MANAGEMENT

A technique used to carefully plan the available amount of time in relation to the tasks that must be fulfilled within a deadline.

BASIC OUTLINE

The first working version of a speech which only shows the rough structure and the elementary orientation points.

THESIS STATEMENT

The main sentence in a speech which marks the main direction of the investigation and a concise summary of the main idea.

CLINCHER

A memorable sentence which is used to close speeches and which is designed to 'resonate' in the mind of the audience.

Theoretical background

Success is not only a great and uplifting feeling but also encourages us to invest more and more time in an activity that brings success and satisfaction. The amount of time we invest in preparing our speech is a sure indicator of possible success in academic speaking too. *Procrastination* – the delaying or postponing of a task – is a sure fire way to failure. Student researchers must realize that preparation for a good speech takes much more time than the actual delivery of the speech. A scientific paper presentation can last from a few minutes to one hour, but the process of preparing a speech in a deliverable form will undoubtedly take as long as a few days if not weeks.

Therefore, first and foremost, careful time management is required from student researchers.

There is a lot to do before a presenter can actually stand up in front of his or her audience. Selecting a topic – when it is not explicitly prescribed in the course – can be a long process itself and may be preceded by a wide range of time-consuming reading about the given subject area. This time is not wasted, however, as much of the collected information can be used and built into the speech later but one day is rarely sufficient to obtain a concise overview of anything scientific. Therefore, desktop research and visiting libraries can consume two or three days for even a five minute speech.

There is not a single piece of work which cannot be updated, improved, altered or completed in some way. One of the most frequent problems student researchers make is that they waste too much time on the different steps of the preparation just to make sure that they will be able to read the most up-to-date and best available sources. It is important to have *sufficient* data and *not all* data for preparing the speech. It is better to have some *usable* visual aid than *the best* image. Student researchers can avoid making this mistake by setting up some internal deadlines for finalizing the necessary incremental steps.

Writing a *basic outline* for a speech is not a one-step activity, but rather a lengthy process which requires continuous re-reading and re-writing of the speech. What may seem to be good in written form is not necessarily equally good in spoken form. Constant revision and repeated evaluations of what has already been accomplished is as necessary as the rehearsal of the final speech. The following section is a summary of the basic steps that are included in the preparation process (based on Sprague and Stuart, 2008, p. 66):

The initial decision includes the selection of the general topic, which is followed by narrowing the scope and determining the focal point of the speech. This stage also includes determining the purpose of the speech; it to inform, analyse or persuade? The most important step here is the *framing of thesis statement*.

Research does not start but instead culminates in the second phase. Some preliminary research is necessary during the initial decision-making phase, but the literature review and collection of sources takes place in the second phase. Always remember that careful note taking is essential throughout the entire process in order to develop a solid theoretical framework and scientific foundation for your argumentation. You are also required to persuade the audience that you are fully informed about the state of the art in the given field.

In the following step, you should develop the basic outline of the speech. Write down the main points and collect supporting sentences for them. If necessary, prepare your visual aids and adjust the presentation with the outline.

Finally, rehearse the speech. Often, we do not have a partner to evaluate our performance, but we can overcome this obstacle by making sound or video recordings. Carefully observe the videos and try to identify and eliminate your mistakes. One important issue for speakers whose first language is not English is to check your pronunciation carefully.

Surprisingly, the majority of your time will be invested in the research and the development phases, because you must be absolutely sure that the data you present or the sources that you use meet the requirements of the scientific community. Furthermore, creativity cannot be planned and rushed. Even experienced speakers sometimes face the problem of sitting at

their desk and waiting for inspiration to trigger the actual writing process, but nothing comes. These crises of creativity cannot be planned and cannot even be, but student researchers should anticipate such a problem and it is good to have some technique at hand to overcome them.

One possibility is asking questions about the topic. Young researchers are sometimes not aware of the fact that any communication – even a scientific speech – which follows a common pattern is basically a dialogue. The only difference between a real everyday discussion and a presentation is that the questions are not asked explicitly. Therefore, when young researchers experience a creative crisis, it might help to ask questions about the topic to overcome the initial paralysis of the mind.

Another element that can crucially influence creative performance is fatigue. Human beings are not machines, and nobody is able to concentrate for an endlessly long time. Student researchers often overestimate their effectivity and plan too much within a too short period of time. Only experience can really show us how effective we are, but when planning your academic speech project, you should take the possibility of this error into account and leave yourself some extra time.

Speech points are defined as paragraphs. A paragraph is an elaborate development of a single thought in a fixed structure which consists of a main or defining statement supported by a series of explanatory statements which concludes with a closing statement. The most important idea that the speaker wishes to convey is included in the first – the defining – sentence. Other authors, for example (Sprague & Stuart, 2008) use different names for defining the main points of a speech and the supporting ideas. The term *coordinate points* is used to refer to the main idea, with *subordinate points* (ibid. 133) referring to the supporting ideas. There is a logical relation

between one main idea and the subordinate points which is most frequently seen as a cause-effect relationship.

Depending on the overall objective of the speech – whether explanatory, persuasive, informative or some other – the strategy for selecting the speech points can vary. One possible choice may be the usage of the so-called topical pattern which indicate that the speaker does not want to differentiate between the topics discussed as the main points of the speech according to any possible criteria, such as, for example, importance or relevance. In a topical pattern the speech points reflect ideas which are of equal importance and are not organized hierarchically. This is the most frequently used pattern of organization.

An alternative to the structure represented by coordinate points is a structure with an emphasized hierarchy between the main points of the speech. The main points can be arranged according to a wide variety of criteria, including the arrangement of the main points from the highest to the lowest relevance, from the most likely to the least probable, or from the most widely known to the least notable. A similar arrangement of the main points can be very advantageous in persuasive speeches.

A third option for the arrangement is the application of chronological order. This pattern is straightforward and puts the main points of the speech in a linear system which can have two directions: from the past to the present or from the present to the past.

Besides the chronological order, speakers can arrange their thoughts according to spatial or geographical patterns.

Cause-effect patterns can also be used. In this pattern the main speech points represent a logical relationship, and this pattern is “well suited to a speech in which the goal is to achieve understanding or agreement rather

than overt action” (Sprague and Stuart, 2008, p. 145). An alternative to the cause-effect pattern is the problem-solution pattern.

The opening and concluding paragraphs of a speech differ substantially from the paragraphs listed in the body of the speech. Although, scientific speech, the main topic in our case, is a highly formal and rigorous genre, some ‘showy elements’ may help the speaker grab the attention of the audience right in the beginning of the speech. According to some authors “You should begin with an attention getter, a few opening sentences of a speech that capture the audience’s interest and invites them to listen to you” (ibid. 205). First and foremost, however, you are required to establish credibility in your introductory paragraph. By emphasizing your deep interest in some notable scientific achievements and publications – primarily those which were the products of some of the members of your audience – will improve your credibility. Therefore, audience analysis should be an extremely important part of the preparation of student researchers. There are other showy elements that can be useful in different public speaking situations, but it is not really advisable to apply them in scientific discourse; they may cause more damage than good. After all, student researchers are often required to speak in front of their tutors and senior colleagues many of whom may be highly appreciated members of the given scientific community. Showing respect and appreciation is always a surer path to success than any attempt to manipulate your audience.

The closing paragraph of the speech is just as important as the opening one. You should provide a summary in this part of the speech and this is the opportunity to point out the limitations of the research which you have spoken about and invite your audience to comment and ask questions. Last but not least, every speaker should thank the audience for their attention. “It

is as important to plan your last sentence as it is your first. Every speech needs a *clincher*, a carefully crafted closing sentence or so of a speech that provides a compelling ending and leaves no doubt that the speech is over” (Sprague & Stuart, 2008, p. 222).

Language study

1. The following expressions are used for making comparisons. Try to use them in sentences and memorize as many of them as possible: *compared to/with, by comparison, in comparison to, as against/opposed to, unlike, in/by contrast, in proportion/relation to, relative.*

2. Translate the following expressions which are used to compare things or people: *draw a comparison/analogy/parallel, liken somebody/something to..., contrast, draw a distinction between.*

3. Which of the following words express *approximate* and which *exact*?

about, exactly, roughly, precisely, right, somewhere in the region of, ... or more, to be exact, directly.

4. Prepare a short speech of three to five minutes. Please note that an average person uses 130 words in a one-minute-long speech, and therefore, thus your speech should be between 390 and 650 words.

Sample speech:

THE PRODUCTION, DISTRIBUTION, AND UTILIZATION OF WEALTH

There are rich and poor people in the world and, though, the number of people who live in extreme poverty has been declining continuously, we still face a lot of inequality. Some argue that the source of inequality is capitalism and the uncontrolled exploitation of workers, while others maintain that capitalism is a means of reducing poverty globally. In my presentation I would like to analyze the two views, contrast capitalism with its alternatives and identify where the truth lies.

Capitalism is an “economic system, dominant in the Western world since the breakup of feudalism, in which most of the means of production are privately owned and production is guided and income distributed largely through the operation of markets” (Encyclopædia Britannica, 2015, p.n.a.). An essential element of capitalism is its dependence on freedom – i.e., the minimum possible control of economic processes by external forces such as government regulations, fiscal and non-fiscal trade barriers, and other restrictions. Capitalism is rooted in the protestant work ethic, in which hard work and frugality are considered as strong ethical values and wealth is seen as a virtue.

Capital is not only the accumulation of money, but that of any “stock of resources that may be employed in the production of goods and services” (Encyclopædia Britannica, 2015, p.n.a.). In the classical understanding, capital comes into existence through the accumulation of resources which “arose out of the excess of production over consumption” (Encyclopædia Britannica, 2015, p.n.a.). Business activities are aimed at creating profit – “A financial gain, especially the difference between the amount earned and the amount spent in buying, operating, or producing something” (Oxford English Dictionary, 2021, p.n.a.). The accumulation of capital makes it possible for a business to expand, multiply its production facilities, employ more employees, and gradually sell more goods to a greater number of customers. Profit generation is an elementary condition for the growth of any firm but can also turn into a self-generating and self-exciting process when the accumulated capital does not serve the growth of the company, increases in salaries and wages, or investment into new technologies anymore.

It is evident that capitalism is able to generate wealth very effectively and can serve as the motor of society, but unregulated – laissez-faire – markets can also generate huge social inequality. Because big and financially powerful companies continue to grow not only due to their more effective production but by abusing their economic power or monopoly position on the market to eliminate competition. Another negative side-effect of unregulated capitalism is its vulnerability to

cyclical economic crises which can cause a domino effect and destroy a large number of workplaces and drive thousands and millions into poverty and debt. Consequently, capitalism needs to be regulated by governments, but this is no easy task as the vast amounts of accumulated wealth allow representatives of large companies to influence political goals, corrupt decision makers and exercise influence without public empowerment. Companies are not democratic institutions, but function in a strict and rigid hierarchical system. Owners and shareholders simply hire managers, but workers and employees are never asked whether they agree or disagree with decisions made at the highest decision-making positions. The constant pressure for profit generation can also create a highly stressful environment.

There are some alternatives to capitalism. One of the most prominent is socialism, which calls for public ownership of the means of production and advocates centralized distribution of wealth. In socialism “everything that people produce is in some sense a social product, and everyone who contributes to the production of a good is entitled to a share in it. Society as a whole, therefore, should own or at least control property for the benefit of all its members” (Encyclopædia Britannica, 2015, p.n.a.). Advocates of socialism argue that private ownership inevitably leads to inequality and that free choice and equal opportunity are not available for the employees but remain the privilege of the rich, who own the capital and the means of production. There have been experiments in human history to build societies based on socialist principles, but these have not been successful and many of them ended up in tyranny.

The solution of the problem might be a delicate fine tuning of a hybrid system where capitalistic production processes are counterbalanced by social protections that ensure a fairer distribution of the accumulated wealth while maintaining the competitive power and vitality of capitalism. It is a complicated – probably never-ending – process taking into account the fact that societies are continuously developing and new technologies, means of production and social changes that will bring along new problems and opportunities.

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8.2 Academic writing: ‘Practice makes perfect’

“If a student works rigorously, no topic is truly foolish,
and the student can draw useful conclusions
even from a remote or peripheral topic.”
Umberto Eco

The text of a thesis, whether a Bachelor, Master or doctoral dissertation and regardless of the field of investigation, should respect all of the essential requirements for the composition, structure and content of its individual sections given that it documents an original research project.

Every thesis is an example of an academic writing genre and is, as was mentioned above, one of those to which the rules of academic register apply most strictly.

While existing templates define the formatting elements, such as margins, fonts, cover layout or title page information, and prescribe certain features, such as compulsory sections and their order, or reference system, the content of individual parts and their organisation depends on the type of conducted investigation.

Producing the text of the conclusions is one of the final steps in the thesis writing process and it should provide a concise and motivating summary of both the thesis text and the research it documents.

Glossary of concepts

COHERENCE

The organisation of a text in a logical and consistent way. If the text is coherent, it is semantically meaningful.

COHESION

The result of a process that makes a text into a united whole. It is a linking (grammatical or lexical) implemented at the level of the sentence and paragraph which makes a text hold together and fully reveals its meaning.

COMPOSITION

The principle of a proportional organisation of items, constituent elements, pieces or objects into a whole.

CONCLUSION

A statement, claim, opinion or judgement that is reached and expressed after some contemplation. It is usually a final feature of a process and provides a final comment or recommendation.

STRUCTURE

A set of relations between items, elements and pieces on the basis of which they are organised into something more complex, i.e., a cohesive whole.

SUMMARY

An account of the content of a text which provides the main points, the most important information and the characteristics of dominant items.

Theoretical background

The text of a thesis conclusion encompasses both a summary and the presentation of research conclusions. Its main aim is to summarise and reflect on the investigation conducted in the thesis research, to provide answers to the research questions, to state whether or not the hypothesis has been proven, to describe the most important findings and conclusions of research, to share any new knowledge gained from the investigation, to

place the thesis research into a broader context of the field of study and to make recommendations for potential future explorations of the research topic.

Depending on whether or not the last chapter of the thesis comprises a discussion, the summary section of the conclusion may be reduced substantially in order to provide more space for the conclusions. The text of the conclusion is not supposed to provide any new information, new arguments or new materials which has not already been provided in the body of the text.

The text of the conclusion begins with the author returning to the research questions formulated in the text of the introduction and answering them using the research findings. By answering the research questions, the author shows that the goals and aims of the research task have been successfully fulfilled.

The author then states whether or not the hypothesis has been proven and explains the benefits and shortcomings of the methodology (methods and techniques) chosen and applied in the investigation. This is also the opportunity to discuss any problems or unexpected impediments encountered in the process of exploration.

Subsequently, the author underlines the most relevant information produced in the analytical part of the thesis and the most important conclusions drawn as a synthesis of the findings and the information from the secondary sources. Moreover, the author should emphasise their own contribution by demonstrating how their research has filled a previously identified gap in the research into the topic, how the findings can contribute to the development of the theory of the studied field, or how the findings complement the work of other researchers. Also, the limitations of the

investigation should be indicated at this point, followed by any limits to the validity of the research findings.

Finally, the author assesses any dimensions and outcomes of the investigation that may have the potential to be further developed in future research by the author or by other scientists and can also suggest proposals for the practical application of the research.

Obviously, the text of the conclusion represents a reflective type of writing. Reflection is defined by the tutors of Research and Learning Centre of the Monash University (Australia) as “a metacognitive process, which means it involves *thinking about our thinking*” ... “[it] is a form of analysis with a focus on you, your thinking, behaviour and actions” ... “Reflecting on a process or your practice may involve consideration of what happened, why, how you felt or how it impacted you, and how you may respond or adapt in the future” (<https://www.monash.edu/rlo/research-writing-assignments/critical-thinking/reflecting>).

Academic writing mechanics

The structure and composition of a thesis depends on the area of study, the type of research, the research topic and the requirements of the university to which the thesis is being submitted. In the humanities, arts and social sciences, the text is composed around a main argument, i.e., a central hypothesis, and the chapters are divided according to the themes and/or character of the primary sources.

Several different compositional forms exist for theses (cf. Hartley, 2008; Luey, 2010):

1. Traditional simple thesis (or argumentative thesis) – the main structure is divided into an introduction, literature review, methodology, analysis/results, discussion and conclusion. This form is typically used for Bachelor and Master theses.

2. Traditional complex thesis (or argumentative thesis) – consisting of an introduction, a background to the theme, extensive literature review, an overview of existing relevant theories, methods and techniques, analysis, a detailed discussion of the results and conclusion. This form is typically used for most doctoral dissertations.

3. Topic-based thesis (or explanatory thesis) – divided into an introduction, chapters focusing on individual topics and conclusion.

4. Compilation thesis (explanatory thesis) – usually consisting of several research articles that replace traditional chapters.

5. Professional or practitioner thesis – less extensive and focusing on practical problems within the field of a profession. Often used for theses of students of professional disciplines such as medicine or social work.

All types of thesis forms share the following standard sections:

1. Cover – containing information identifying the university (and faculty) to which the thesis is submitted, the type of thesis (Bachelor, Master, doctoral dissertation), title, name of the author, year of submission

2. Title page – containing information identifying the university, faculty and department to which the thesis is submitted, the study field/programme and specialisation, the type of thesis (Bachelor, Master, doctoral dissertation), title and subtitle, name of the author, name of the supervisor/consultant, year of submission

3. Abstract and keywords (usually in the language of the thesis and in one other language) – containing information about the research topic, aims, questions, basic methodology, primary sources
4. Table of contents – titles of sections and their page numbers
5. List of abbreviations and symbols – specific abbreviations and symbols with their full versions and/or explanations
6. List of figures, tables, charts, diagrams, other graphic material – including page numbers. The numbering of graphic materials follows their location in chapters and subchapters
7. Introduction – information about the research topic, motivation for its choice, research aims, research questions, research hypothesis, outline of research methodology, primary sources with the criteria for their selection, brief description of individual chapters and subchapters
8. Main body of the thesis – chapters divided into subchapters
 - 8.1 Theoretical framework;
 - 8.1.1 Literature review
 - 8.1.2 Methodology of research – methods and techniques
 - 8.1.3 Primary sources – detailed description of selection criteria
 - 8.2 Empirical / Analytical part
 - 8.3 Discussion – overview of analysis and research outcomes
9. Conclusion (for more on composition, see above);
10. Resume in another language (i.e., mother tongue, foreign language). This usually consists of a summary of the same information which appears in the Conclusion.
11. Bibliography – divided into Primary sources and Secondary sources

12. Appendices

Errata – a separate sheet of paper inserted into the printed version in case the author finds significant mistakes which need to be corrected after the thesis has been printed and bound.

Study questions

1. There are four principles of academic writing, those of *formality*, *efficiency*, *modesty* and *clarity*. Explain these principles and provide descriptive examples for each of them from your own academic writing practice. Which of them do you consider to be most demanding? Which of them would you characterise as being based on culture?

2. In the academic information system of your university, find examples of Bachelor, Master theses and doctoral dissertations. On the basis of an analysis of the introductions and conclusions of the texts, present examples of higher and lower levels of cohesion and coherence. Does the composition of these texts follow the principles and requirements described in the text of this subchapter?

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CHAPTER 9 ACADEMIC RHETORIC

9.1 Academic speaking: Finalizing and fine-tuning

The preparation process closes with the development of the actual speech and with its rehearsal. The development phase requires a thorough review of the accumulated information and the main goal of the process is to achieve the highest possible degree of clarity and logical coherence of the speech.

Speakers also have to decide about the examples which they plan to use for clarification and in the selection of statistical and other data and speakers should also evaluate different persuasive strategies that they would like to apply during the speech. Finalizing a speech is no easy task and requires concentration and strategic thinking from speakers.

Glossary of concepts

CLARITY

The quality of a speech which refers to the lucidity of the text and suggests that it is well-structured and that all expressions are satisfactorily explained and used correctly.

COHERENCE

The quality of being clear, logical, and understandable.

FINE-TUNE

To improve the quality of the speech by making small changes to achieve a more elaborate level and clearer style.

GENUS-SPECIES

Latin expression meaning dictionary definition.

TABOO TOPICS

Topics which might be considered offensive or unpleasant by certain individuals or groups of people.

Theoretical background

When the broad structure of the speech is ready and the main speaking points have been selected, the speaker must decide about its fine tuning in order to achieve the highest possible clarity and logical coherence.

Although academic speeches require the use of formal vocabulary and academic expressions, this necessity should not be emphasised to the detriment of clarity. Therefore, the speaker must make sure that all of the expressions – including the professional terms – used in the text will be absolutely clear and understandable to the audience. There are many possible methods for defining words correctly. “Logical definition, also known as genus–species or dictionary definition, has two steps. It first places the concept to be defined into a category, then it explains the characteristics that distinguish that concept from all other members of the category” (Sprague and Stuart, 2008, p. 197). Etymological definitions analyse the historical roots of words that originate from older cultures. Operational definitions provide a short explanation of the object or process the context of how it operates. Synonyms or opposite meanings of the words can also be used for clarification.

Secondly, the use of examples must also be carefully analysed. Academic speeches must heavily rely on facts and the examples used must be carefully selected, with speakers ensuring that the selected examples are representative. The selected examples should also be presented in sufficient detail. Taking into consideration the fact that academic audiences are

generally well-informed about the state of affairs in their fields and in adjacent branches of science, the examples selected should not be explanatory but rather demonstrative. The same applies to statistical evidence. Both examples and statistical data must originate from reliable and reputable sources. Statistical data can be misleading or can be interpreted differently by different authors, so it is advisable to check and double-check the data. Furthermore, statistical evidence must be interpreted clearly and straightforwardly.

In summary, in the final phase of development the speaker will have to make sure that the message is clear and understandable in every aspect. Using the proper words and professional terminology is necessary. Finally, it is advisable to avoid risky and taboo topics and the speakers must make sure to use inclusive language.

Language study

1. The following expressions are used for *explaining*. Translate them and try to use them in examples of sentences: *this means that, that is, i.e., in other words, to put it another way, to put it simply, specifically*.

2. Most of the following words are synonymous. Select and translate them: *explain, point up, underline, set out, go through, outline, expand on, clarify, highlight, emphasize*.

3. When something is important, certain expressions are used. Study the examples and use them in sentences: *I would like to stress that..., it should be noted that..., it is worth bearing in mind that..., crucial/vital/essential*.

4. When we would like to emphasize that one person or thing is more ... than others we can use some of the following expressions: *in particular, especially, particularly, notably, above all, most of all, most importantly, most significantly.*

5. Prepare a short speech of three to five minutes. Please note that an average person uses 130 words in a one-minute-long speech, and therefore your speech should be between 390 and 650 words.

Sample speech:

CLASS, SOCIAL ORGANIZATION, AND SOCIAL

The term class is used to describe the stratification of human society. Although everybody accepts the principle that all human beings are equal, our society is far from being egalitarian. Social groups constitute a hierarchical system in which positions are defined primarily by the socioeconomic status of the members. In this presentation, I would like to highlight some aspects of social stratification.

When discussing social class, one is confronted with the Marxist view which sees class division as a dualistic and antagonistic system in which the bourgeoisie – the owners of the means of production – exploit the proletariat, defined as “the class of industrial workers who lack their own means of production and hence sell their labor to live” (Merriam-Webster Dictionary, 2021, p.n.a.). This view, however, excessively simplifies the question and in doing so ignores the fact that human society is a much more complex fabric in which other aspects than control over the means of production can also influence the formation of groups. National identity or religious belonging can be very powerful group-forming factors too. For a more complex picture, we can turn to the work of Max Weber – a German sociologist – who “proposed limiting the concept of class to impersonal income distinctions between groups, thereby distinguishing class from social status, collectivities, or political hierarchies” (Encyclopædia Britannica, 2015, p.n.a.).

The Weberian definition of social class springs from the protestant work ethic, which assumes that hard work, thrift, discipline and self-sufficiency are virtues and will lead to eternal salvation. The protestant work ethic and capitalism are in a close relationship in the Weberian explanation of social stratification. In this view, higher social status is the

result of hard work and a disciplined lifestyle where responsible decision-making, ethical behaviour, investment in education and accumulation of capital – economic and social – contribute to the well-being of the individual. Belonging into a social class is therefore conditioned by choices made at the individual level.

The Weberian explanation, however, does not provide an answer to the question the extent to which social stratification is justifiable when inherited. To what extent is upward social mobility possible when social status of the upper class is maintained by isolated enclaves – schools, clubs, political parties, etc. – in which older generations pass down the means and recreate the necessary social networks for the new generations to maintain their social status? In this situation, it is extremely hard – if not impossible – for a new candidate to become a fully accepted and recognized member of the upper-upper class (i.e., aristocracy) because wealth is not the only requirement to be fulfilled. Tradition, inherited status, and elite education necessary for developing taste and style required all influence high-class membership and the distinction between ‘old money’ and the ‘nouveau riche’ remains painful.

We must acknowledge that even if income differences could be reduced relatively quickly (within one generation), the lack of social and cultural capital can be accumulated only over the course of several generations. A famous quote from the second President of the United States, John Adams, clearly expresses this sentiment:

I must study politics and war that my sons may have liberty to study mathematics and philosophy. My sons ought to study mathematics and philosophy, geography, natural history, naval architecture, navigation, commerce, and agriculture, in order to give their children a right to study painting, poetry, music, architecture, statuary, tapestry, and porcelain (Adams, 2021, p.n.a.).

What conclusions can we draw from these thoughts? First, it is useless to deny that human society is, and has always been, stratified along many criteria, which exist parallel to each other and which create a society in which status, wealth, social position and heritage play crucial roles. Second, similar social stratification does not seem to vanish, and the dream of a classless society will remain a dream for a long time. Fostering social mobility is an obligation of modern societies, but we should not forget that for achieving success individual effort is equally important.

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9.2 Academic writing: Presenting and defending

“During this defense, the thesis advisor and one or more readers give a report that may include objections to the candidate’s thesis.

This report sparks a discussion in which other professors participate as members of the committee.”

Umberto Eco

The defence of a thesis is yet another element of academic discourse and at the same time it is an act of public speaking, because thesis defences are considered public events in many countries. The thesis defence completes the procedure of scientific investigation that is documented in the thesis.

The traditions concerning defences vary in different countries. In some countries they are called *viva voce*, in others thesis presentations or thesis defences. The online Merriam Webster Dictionary states that

Viva voce derives from Medieval Latin, where it translates literally as ‘with the living voice.’ In English it occurs in contexts, such as voting, in which something is done aloud for all to hear. Votes in Congress, for example, are done *viva voce* - members announce their votes by calling out ‘yea’ or ‘nay.’ While the phrase was first used in English as an adverb in the 16th century, it can also appear as an adjective (as in ‘a *viva voce* examination’) or a noun (where it refers to an examination conducted orally).

(<https://www.merriam-webster.com/dictionary/viva%20voce>)

The procedures leading to a thesis defence and the format of the defence proper are based on university traditions but they are also influenced by aspects of the culture of the country.

Glossary of concepts

CO-SUPERVISOR (OR CONSULTANT) OF THESIS

A senior lecturer, associate professor or full professor from the same or different department/faculty/university, or an expert from a relevant workplace or a related profession who helps students with specific features of research during the investigation, complementing the expertise of a supervisor.

CO-SUPERVISION OF THESIS (CO-TUTELLE DE THESE)

The model for joint supervision of a thesis (French ‘co-tutelle de thèse’, Spanish ‘cotutela de tesis’) by two supervisors from different universities in various countries was introduced as a result of an initiative of the French Government to create a procedure for the joint supervision of doctoral candidates between French universities and universities in other countries. Nowadays, arrangements using the ‘co-tutelle’ model have been established among various universities in European countries and elsewhere. Enrolled doctoral (PhD) students receive support from two research and academic communities and discover different scientific approaches and fresh theoretical perspectives as they work with experts who can broaden their scientific horizons. Thesis co-supervision encourages doctoral students to reach beyond their familiar borders to both enhance their education and take part in a world-class research network. Moreover, they experience the rich social and cultural life of their home university and that of a university in a different country. Graduates of this type of study not only gain a significant professional advantage based particularly on the comparison of subject-matter and methodology and on achieving a mastery of expert communication in a foreign language, but they also improve their professional opportunities in the framework of international competition.

OPPONENT OF THESIS

An opponent is one of thesis reviewers. Opponents are experts in the field of research documented by the thesis. In some countries Bachelor and Master theses are reviewed by a supervisor and by one opponent, while in others they are reviewed by two opponents. Doctoral dissertations and habilitation theses are usually reviewed by at least three opponents.

REVIEWER OF THESIS

A thesis reviewer is a person, usually a senior university lecturer, associate professor or full professor, but sometimes also an expert from a relevant workplace or a related profession, who critically assesses the text of the thesis and writes a review.

SUPERVISOR OF THESIS

A supervisor is an expert in the area of research chosen for the thesis, usually a senior lecturer, associate professor or full professor based in the department in which the student has written his/her thesis. Supervisors provide expert guidance for students throughout the process of the investigation and thesis writing, advising them on various aspects of both research and its documentation in the thesis.

THESIS DEFENSE/EXAM BOARD/COMMITTEE/COMMISSION

A thesis defence board (or committee or commission) also called a thesis exam board in some countries, is a body of experts before whom the defence of thesis is performed. Each university has its own rules dictating the composition of a thesis defence board. It is usually composed of senior lecturers, associate professors and full professors, representatives of a workplace or a profession. Reviewers may or may not be members of the defence board.

THESIS REVIEW

A review is a text written by a reviewer of the thesis. It usually contains introductory descriptive sections in which a reviewer provides a thesis summary and then proceeds with a critical evaluation of both content and form of the thesis. In the final section the reviewer usually formulates questions that should be answered or discussed during the defence. Some universities have specific formats and/or content requirements for reviews, with some also using review templates.

Theoretical background

Public thesis defence is an illustration of public speaking skills which belong among the most essential advanced skills of a university graduate in the 21st century. Public speaking skills are nowadays required at all levels of the social and professional life of an individual with a university education and as such are taught to students and practiced by them throughout their study (for example, in presentations of seminar assignments, individual or group project presentations). The ultimate proof of the mastery of effective public speaking skills is a thesis defence.

DeVito claims that public speaking skills at present branch from a classical heritage that stresses the substance (of the content) and the ethics of the speaker, but they are also influenced by new trends in humanities and social sciences, intercultural and transcultural communication features and by information and communication technologies (DeVito, 2018, p. 23). The thesis defence therefore follows a prescribed format that, in many cases, has not been modified for decades or even centuries, but which nonetheless allows authors of theses to use audio-visual presentations projected for the

members of the defence board with the most up-to-date audio-visual equipment.

Similarly, the main purpose of the thesis defence and the process of its preparation have remained unchanged. The author of the thesis should be able to demonstrate their extended knowledge in the selected research field, to prove their authorship of the thesis, to defend their research project, to share the investigation findings and conclusions (i.e., their contribution to the specific research area), and to discuss the comments and answer the questions of the reviewers and the members of the defence board. For the latter, the author receives the reviews in advance (although in some countries and mostly at the PhD level, candidates do not receive reviews before the defence and they are expected to respond to the comments and questions without prior preparation).

The defence is usually divided into three sections. It begins with the author's presentation in which he/she should summarise the research topic, the aims of the investigation, the research questions, the hypothesis, the methodology used, the criteria for the selection of primary sources and, most importantly, the findings and conclusions. The text of the presentation should not be read verbatim in the defence (see more in the Academic writing mechanics section below).

The second part of the defence is driven by the reviews that are usually presented by the reviewers in full or summarized by them. The author should respond to the criticism, comments, suggestions and questions. If the author has been provided with the reviews in advance, the author should bring their own print version to the defence and prepare his/her responses in great detail. The reactions should not be read but should rather be presented with the use of notes.

The third and final segment of the defence is a general discussion in which the author replies to the questions asked by the members of the defence board and any members of public present at the defence. Rules about who can actually contribute to the general debate and/or ask a question are specified by each university. The author may anticipate questions and prepare possible answers in advance because academic practice shows that most questions fall into one of the following categories:

1. Research topic and its selection criteria
2. Methods and techniques used and the criteria for their range
3. Criteria for the selection of primary material
4. Comparison of the author's findings with existing research
5. Contribution of the author's investigation, novelty and uniqueness of the findings and conclusions
6. Practical application of the research findings
7. Items in the bibliography

Academic writing mechanics

A visual presentation projected for the members of the defence board can substantially enhance the level of the thesis presentation. It gains and maintains the attention of an audience, adds to the clarity of content, contributes to the confidence of the author, and offers evidence.

Visual presentations can be made using one of the standard presentation tools, such as PowerPoint, Google Slides, or Keynote. More advanced presentations often use Visme, Haiku Deck, Pitcherific, Canva, SlideCamp, Microsoft Events, Powtoon, VideoScribe, Prezi or any other available platform or tool.

The content requirements for the thesis defense presentation have been discussed above. The general guidelines regarding its format are as follows (cf. DeVito, 2018, pp.107-124):

1. Number of slides – one slide is typically allocated two minutes of the presentation. It is better to prepare fewer slides because time management in presentations is also an important academic skill.

2. Amount of text in individual slides – slides should not contain masses of text; notes/phrases in a bullet format are more suitable. Four to six lines in one slide is typically considered the maximum.

3. Visuals in individual slides – any visual aids should be relevant to the content and no ‘decorative’ graphics should be used. Use charts, tables, etc. only if they are directly related to the presented issues.

4. Backgrounds and colours of text – a dark text on a light background is generally preferred (the higher the contrast, the better) and ‘rainbow-like’ representations of colours are not recommended. Too much colour can distract the audience, and the defence of thesis is as formal event in which the register of the presentation should mirror the register of the thesis.

5. Size of font selected for texts in slides – minimum 24-point, ideally 30-point. Do not use italics as they can be difficult to read. Be consistent in use of typeface, size and colour. Less is more, and simplicity is preferable.

6. Anticipate technical problems and have a back-up plan, for example, handouts with copies of presentation slides.

7. Rehearse the presentation several times.

It is strongly advised that both the first and the second parts of defence, i.e., the presentation and response to reviews, should be rehearsed aloud. The author should be dressed in a manner respecting the academic traditions of the university and the country in which the defence takes place. If the university has a document where dress code is described, it should be respected. In case of its absence, the author should show respect to the formal nature of the defence and to the reviewers and the defence board members.

Study questions

1. The thesis defence is also an event where members of the academic community practice *academic socialisation*. Find out about the rules of academic socialisation in your country and at your university and compare them with the rules applied in other countries. How do these rules differ? Can you identify the roots of these differences? Is it possible that these differences might become less significant and gradually disappear? What factors can contribute to the unification of academic socialisation?

2. Define and describe the concept of *academic culture*. Prepare a 10-minute-long visual presentation using a computer-assisted presentation tool about the academic culture in your own country, comparing it with an academic culture in some other country.

3. Analyse the quote by Armstrong below. What does he identify as a driving element of the quest for knowledge? Can you find parallels in statements of other personalities in science of the 20th century?

“Mystery creates wonder and wonder is the basis of man's desire to understand.”

Neil Armstrong

(<https://www.brainyquote.com/authors/neil-armstrong-quotes>)

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Developing Academic English in Speaking and Writing
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Publisher: Pavol Jozef Šafárik University in Košice
Publishing ŠafárikPress

Year of publication: 2021
Pages: 154
Author's sheets: 6,8
Edition: first

<https://doi.org/10.33542/DAE2021-960-3>
ISBN 978-80-8152-960-3

