

ACADEMIC RESEARCH



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Researching in higher education

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Academic research

Researching in higher education

This chapter outlines basic knowledge on academic research, provides a fundamental guidance to novice researchers and introduces terminology that will enable them to be better oriented in international interactions related to the publishing of research papers and reviewing processes.

8.1 RESEARCH IN GENERAL, ITS OBJECTIVES AND TYPES

The main responsibilities of any university (and particularly its teachers) might be defined as a) producing new objective knowledge via valid methods; and b) disseminating this knowledge among both the existing international scientific community (i.e. researchers, experts, professionals) and their future members (i.e. students). Research is reflected in university education as a never-ending cycle: its outcomes are a starting point and a source of university education and, at the same time, it is its final product (e.g. a diploma thesis as a product of academic research conducted by a graduate).

Methodology of science lists hundreds and hundreds of definitions explaining what research is. In opposition to superstitions of intuitive learning, research can be defined as the systematic search for objective knowledge by means of verified and valid methods.

Considering its various objectives or used procedures, various types of research can be determined, usually classified into the following dichotomies:

Basic vs. applied research

- *basic*: its primary aim is to discover new facts or develop new theories, it looks at causes, effects, and the nature of things;
- *applied*: its aim is to apply new ideas and new theories developed through basic research of specific problems in real situations.

Primary vs. secondary research

- *primary research*: collecting and interpreting entirely new data gained via any research method;
- *secondary research*: summarising and interpreting existing data. As opposed to primary research where researchers collect data directly from texts, or respondents, during secondary research researchers collect data that already exist and were published by other authors (this type of research is characteristic for bachelor theses).

Scientific vs. academic research

- *scientific*: it is conducted by members of the scientific community using advanced scientific procedures;
- *academic*: research conducted typically by students under the supervision of an experienced professional. Along with investigating new knowledge, students develop their academic skills necessary for doing research. The benefits they get may include familiarity with fairly routine procedures, learning research methodology, learning the operation of any relevant equipment, and absorbing the "culture" of the discipline.

8.2 ACADEMIC RESEARCH

Academic research is a research conducted by students as part of their academic training or by academics as part of their academic/researcher career (c.f. Brew & Lucas, 2009; Kalenda, 2013; Pokrivčáková, 2011). University teachers thus regularly participate in academic research in two ways: a) as tutors of students who work on their theses (for more see Gavora, 2013; Szimethová & Kočicová, 2014) or b) as conductors of their own academic research (see Introduction to Wiegerová et al., 2013).

The outcomes of academic research are typically summarised in the form of theses (dissertations). The submission of a thesis is a compulsory part of every study programme and its defence is included into state exams (in Slovakia see § 51, par. 3 of the Higher Education Act 131/2002). Generally, the thesis is seen as proof of the student's ability to conduct independent research under (bachelor, diploma and doctoral theses) or without the guidance of a supervisor (rigorosa and attestation theses as well as habilitation theses which are required in some countries).

All theses must follow the same rules of scientific methodology and share a common structure and academic discourse; however, the type of the thesis determines its orientation, methodological complexity and the level of significance of academic research outcomes and contributions.

Academic research outcomes are usually published in one of the following **types of theses**:

a) Bachelor thesis (bakalárska práca) – it is the final thesis required as one of the conditions for the completion of every bachelor study programme (in Slovakia pursuant of the Higher Education Act 131/2002, § 52, par. 4). By writing and defending a bachelor thesis, a student demonstrates knowledge and orientation in the study field corresponding with the respective study programme and the necessary skills to collect, interpret and process scholarly literature and other information sources. Although the academic research planned and conducted for bachelor theses is usually very simple, it still must follow all the rules of scientific methodology. The bachelor thesis can be based on a compilation, synthetic review of literature, or be a part of applied research with **new synthetic views** on a given topic or with new knowledge of limited extent. The outcomes should be of pragmatic character and applicable in students' future professions.

b) Diploma thesis (diplomová práca) – it is the final thesis required for the completion of every masters (magister) study programme (in Slovakia pursuant of the Higher

Education Act 131/2002, § 53, par. 4). Compared with the bachelor thesis, the diploma thesis should be longer, more detailed, following all standards of research work and present **new knowledge** for a particular study field. The diploma thesis has the character of a **simple scientific study** based on a representative selection of specialised scholarly literature. The author of the diploma thesis demonstrates his/her skills to conduct academic research (under the supervision of an academic staff member) and present new academic outcomes useful for practice.

c) **Rigorosa thesis (rigorózná práca)** – it is submitted as part of rigorosa exams to acquire the academic title of doctor (PaedDr., PhDr., RNDr., JUDr., etc.). Its character and structure is very similar to the diploma thesis. The only difference is that the rigorosa thesis, including the research necessary to complete the thesis, is conducted independently by its author, without the help of any supervisor.

d) **Doctoral thesis (dizertačná práca)** – it is part of the doctoral study programme and it reports on a research project. The doctoral thesis should be a **substantial and original contribution** to scholarship. Through its composition and defence the author demonstrates his/her preparedness and the already formed skills necessary for independent research work. The doctoral thesis has a character of **concise scholarly work** based on the author's detailed knowledge of relevant scholarly literature and excellent orientation in previously acquired research results and outcomes. The author of a doctoral thesis illustrates his/her ability to prepare, organise, carry out and present valid and reliable research by using an appropriate combination of research methods.

Other types of theses include the **final thesis (záverečná písomná práca)**, **attestation thesis (atestačná práca)**, and so on.

8.2.1 Academic research procedure

Academic research, as with any other research, must be systematically planned and organised. At the same time, the gained data must be interpreted in line with the rules of scientific methodology. Many handbooks and manuals mention the basic 6-step scheme of a research procedure (steps of a scientific method):

1. DEFINE A RESEARCH PROBLEM
2. DO BACKGROUND RESEARCH/REVIEW SOURCES
3. FORMULATE RESEARCH QUESTIONS/HYPOTHESES
4. TEST YOUR HYPOTHESIS BY USING A VALID RESEARCH METHOD
5. INTERPRET YOUR DATA AND DRAW CONCLUSIONS
6. SHARE YOUR RESULTS

Although it seems that the research process is a simple step-by-step procedure, in reality such linear progress is extremely rare. More often, after some steps, a topic may need to be narrowed and an initial research plan revised. Sometimes some material needs to be

added and some deleted. Sometimes new data do not support the initial thesis of the research and the whole research project (objectives, hypotheses, research questions) needs to be revised and adapted, which may be exceptionally frustrating. Therefore, conducting research not only requires healthy curiosity and common sense, but also researcher's intentionality, purposefulness, patience, and single-mindedness.

1. DEFINING A RESEARCH PROBLEM

"Defining a problem" as a first step of a research procedure in fact means selecting a topic that will be observed. Typically, topics for various types of academic theses are formulated and published by supervisors. They used to be rather general to give students/authors some space for individual needs and independent contributions. However, in many institutions students/authors are allowed to choose their own topics.

Aspects to be considered when **formulating a topic** for research include:

- attractiveness of the topic;
- urgency of the research problem or topicality of the issue;
- author's personal and professional preferences;
- institution's priorities (some topics for theses may be in line with the research activities of a supervisor/department/university, or they may be part of larger projects);
- availability of research terrain (setting, respondents, etc.);
- availability of research method;
- time, material and financial demands of research, etc.

2. DOING BACKGROUND RESEARCH & REVIEWING SOURCES

No research is "an island in the sea of ignorance" (it is very unlikely that any contemporary researcher is the first person all over the world interested in the topic). On the contrary, research must be set in a wider context. It must build upon the results of previous research and, later on, it may become the inspiration and starting point for other researchers in the future. Therefore, the researchers need to prepare a critical review of literature (scholarly articles, books, on-line sources, dissertations, conference proceedings, etc. relevant to the area of research).

Moreover, the researchers' awareness of previous researchers, existing theories, and various information sources help them identify the research problem, select suitable methods and position new research in an existing academic context.

During this phase of academic research, the author should answer the following questions:

- *What sources can be found dealing with the topic?*
- *What is the terminology used to describe the topic?*

- *What authors have been interested in the same topic and what have they written on it?*
- *How is each work similar to and how does it vary from other ones?*
- *Which sources make the greatest contribution to the understanding and development of their area of research?*
- *What research was conducted previously on the topic? Are there different results?*
- *What theoretical approaches have been applied to study the topic?*
- *What research methods have been applied to study the topic?*
- *Are there any standardised/non-standardised, but reliable and valid research instruments you can use to conduct your research?*
- *Is there any aspect of the topic that has not been questioned yet?*

In the thesis, this phase of academic research is summarised in the part called **Literature review** (sometimes known as a theoretical part; it usually takes up approx. one third of most theses). The review not only involves information collected from various sources (the more the better) but, what is more important, their critical evaluation. Some students wrongly understand the review as an enumeration of available sources, summaries, and quotations from them (an obvious sign of such an approach is when every paragraph begins or ends with the name of a researcher). This could never be enough – even for the bachelor thesis. Each source should be seen in the context of its contribution to the understanding of the subject. Literature review is thus the result of **secondary research**. A quality review of literature both prevents duplication of effort and gives a steady theoretical background for research activities described in the empirical/practical part of the thesis. However, literature review does not present new knowledge and cannot be considered as a contribution to primary scholarship.

A good literature review:

- *is related directly to the research question you are focused on;*
- *gives a summary of what is and is not known yet;*
- *identifies areas of controversy between opinions and previous research;*
- *formulates research problems that need further attention and research.*

Most frequent **mistakes and weaknesses** found in the theses:

- *not enough sources;*
- *lack of recent sources;*
- *lack of scientific sources;*
- *rather random selection of sources without any system and sequence;*
- *relying on unreliable sources (e.g. students' internet pages, chats, anonymous sources without revealing the name of the author or institution – for guidelines see Cornell University Library, 2011);*

- *the author just collects and quotes sentences from sources without his/her own contribution (comparison of their meaning and impact, critical evaluation of the strengths and weaknesses of some ideas, etc.).*

3. FORMULATING RESEARCH QUESTIONS/HYPOTHESES

Once the background research has been done, the researcher should generate one or more unanswered questions which arose from literature review and which are worth exploring further. They are called **research questions** since they give direction of all the further steps.

Examples:

- *What is the effect of the amount of air oxygen on green plants health?*
- *What is the relationship between using ICT technologies in the class and students motivation?*

In specific cases when the impact of one aspect of reality (independent variable) on other aspects (dependent variable) is measured, or the relationship between these aspects is tested, the researcher formulates testable hypotheses. A hypothesis is thus a statement (not a question) that expresses the probable relationship between two variables.

Correctly formulated hypothesis meets the following **criteria**:

- *states the purpose of the research;*
- *implies the population that you are going to study;*
- *clearly identifies the independent and dependent variables to be measured/tested;*
- *specifies the nature of the relationship that exists between these variables;*
- *is simple and uses precise language (it is better to have several simple hypotheses than one complicated hypothesis).*
- *is falsifiable and testable with a selected research method.*

Examples of **appropriately formulated hypotheses**:

- *When there is less oxygen in the air, green plants suffer more diseases.*
- *Students motivation will grow with the growing number of the lessons where ICT technologies will be used.*

Examples of **inappropriately formulated hypotheses**:

- *Air oxygen is good for green plants health.*
- *Using ICT technologies in the class is an effective motivational means.*

For more details on formulating hypotheses for various fields of academic research see e.g. Švec et al., 1998; Ondrejko, 2007, etc.

4. TESTING HYPOTHESES BY USING A VALID RESEARCH METHOD

In dependence on the research problem and the aims of academic research, particular research methods are selected. If fulfilling research objectives requires collecting quantitative data and its statistical processing, the researcher chooses from the set of methods suitable for the quantitative design of the research (Creswell, 2002; Sharma, 2010; Wrench et al., 2008). If fulfilling research objectives is based on understanding individual cases (meanings, experiences, etc.) and the processing of qualitative data, the researcher reaches out for methods suitable for the qualitative design of research (for more see Creswell, 2002, 2007; Hatch, 2002; Wolcott, 1994). To gain objective and valuable data, it is sometimes necessary to combine research methods from both research designs (e. g. through triangulation). For the overview of selected research methods for academic research in selected research fields see Tab. 1.

5. INTERPRETING RESEARCH DATA AND DRAWING CONCLUSIONS

“By the time you get to the analysis of your data, most of the really difficult work has been done. It's much more difficult to: define the research problem; develop and implement a sampling plan; conceptualise, operationalise and test your measures; and develop a design structure. If you have done this work well, the analysis of the data is usually a fairly straightforward affair” (Web Centre for Social Research Methods, online).

Concrete techniques of data collection, processing and formulating conclusions always depend on the method selected for the research. In most research the data analysis involves the following steps:

- data collection;
- data preparation (organisation and classification);
- statistical processing of quantitative data (either exclusively in written form, or along with verbal interpretations the researcher may use graphs, charts, scales, tables, etc.);
- comparing new results with previously known ones (summarised in the review of literature);
- formulating conclusions.

Linguistics	Applied Linguistics and Language Pedagogy	Cultural Studies (acc. to Dennis, 2011)	Literary Studies
<ul style="list-style-type: none"> • synchronous research; • asynchronous research; • dynamic synchronous research; • linguistic description; • linguistic analysis; • linguistic classification, etc. 	<p>Quantitative research methods:</p> <ul style="list-style-type: none"> • variety of surveys (questionnaire, interview); • experiment; • quasi-experiment; • sociometrics; • tests; • scaling; • numerical methods such as mathematical modelling. <p>Qualitative research methods:</p> <ul style="list-style-type: none"> • action research; • direct observation; • participant observation; • case study; • ethnography; • qualitative debate; • qualitative observation; • content analysis of written documents; • in-depth interviews; • unstructured interviewing; • grounded theory 	<ul style="list-style-type: none"> • sociological research method; • empirical research method • historical research method • anecdotal research method 	<p>literary interpretation drawing on procedures of various literary critical approaches, e.g.:</p> <ul style="list-style-type: none"> • comparative; • psychoanalytical; • psychological; • pragmatic; • archetypal; • mythical; • cognitive; • linguistic; • intertextual, etc.

TABLE 8.1: Overview of selected research methods for academic research in selected research fields (Pokrivčáková, 2011, p. 13)

In the phase of **comparing new results with previous knowledge summarised in the literature review** the researcher compares newly gained research results with those collected in the preparation phase. The researcher points to both confirmative and opposing results. The results of this phase are summarised in the subchapter called “Discussion” where the new research and its results are discussed in relation to previous research.

When **formulating conclusions**, the researcher summarises the results of their research in a shortened and concise form.

6. PUBLISHING RESEARCH RESULTS

The last phase of academic research is its presentation. This phase includes two main steps: writing a research report (or a thesis) and, if required, presenting it orally during its oral defence.

The thesis should prove to be the result of systematic, planned and organised activity. It has to:

- be objective, therefore it must follow the rules of scientific methodology – the author should be informed about and skilled to select and use appropriate scientific methods, and to interpret the received data;
- cover the previous knowledge (no thesis can start without first reviewing or informing the reader about previous scientific results and opinions of other authors), and enrich further knowledge;
- be written in an academic/scientific discourse;
- meet the norms of academic/research ethics.

The academic researcher or a tutor who helps and directs another academic researcher can consult many manuals on how to write a research report, a journal study or any other type of research paper - for more see e.g. Alreck & Settle, 1995; Birley & Moreland, 1998; Cohen, Manion, & Morrison, 2000; Čmejrková et al., 1999; DeMarrais & Lapan, 2004; Denscombe, 1988; Eco, 1997, 2015; Ellis & Levy, 2009; Gavora et al., 2010; Katuščák, 1998; Klincková & Šůra, 2004; McCuen, 1996; Leedy & Ormrod, 2010; Luan, 2002; Meško et al., 2005; Richey & Klein, 2007; Turabian, 2013; and others. As for their content and structure, all theses must follow the rules of scientific methodology relevant to a given field of research.

<p>Title page</p> <p>Assignments</p> <p>Acknowledgements</p> <p>Abstract both in mother tongue and in English</p> <p>Table of contents</p> <p>Introduction introducing the research topic, with an explanation of why the subject was chosen for study;</p> <p>Literature review chapter(s) setting the thesis into the existing research context and reviewing relevant sources;</p> <p>Methodology chapter(s) explaining how the research has been designed and why particular research methods have been chosen, a straightforward description of particular equipment, processes, or materials used is required so other researchers can replicate your study;</p> <p>Findings chapter(s) outlining the findings (results) of the research itself;</p> <p>Discussion chapter(s) giving the analysis of the findings and discussing them in the context of the literature review - this chapter is often divided into two—analysis and discussion;</p> <p>Conclusion is usually much shorter than the discussion chapter, it summarises the main points of the research and explains what they mean for the field of study;</p> <p>Summary/resumé a brief summary in other language</p> <p>Bibliography a list of resources</p> <p>Appendices</p>
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TABLE 8.2 The most frequently used structure of the thesis

Other parts of theses (list of figures, list of tables, list of abbreviations and symbols, glossary, etc.) may or need not be included, depending on the particular type of thesis and the rules defined by individual universities.

QUICK TIPS FOR THESESES AUTHORS

- **Understand** why and what you are going to do.
- **Plan** your steps carefully.
- **Think clearly and be honest.** Your aim is to be clear in explaining your point. The efforts of some authors to hide their ignorance on the topic, or to pretend that they know more than they actually do, become quickly obvious to the reviewers and other readers.
- Always keep your **aims** (as defined in the assignment) grounded and to the fore.
- There are three aspects of the thesis you have to be careful about and all three of them are intertwined and none of them should be neglected:
 - structure;
 - substance;
 - style.
- Keep good and precise records of all sources.
- Stick to the recommended thesis structure you have been given by your institution.
- Start writing your methodology and findings chapters first.
- Proceed by writing the analysis chapters.
- Continue by writing the literature review chapters. For your literature review you should select only the information directly related to the topic of your thesis and necessary for the understanding of its findings and conclusions.
- Then complete the rest: conclusion, introduction and summary chapters in that order.
- Other parts (e.g. appendices) may be written as you go along.
- Write carefully.
- Avoid any dishonesty, clutter, and verbiage.
- Ask your supervisor to check and critique your thesis draft and amend it accordingly BEFORE submitting it.

TABLE 8.3 Quick tips for theses authors (adapted from Chandrasekhar, 2002, p. 32)

8.3 TYPES (GENRES) OF RESEARCH PAPERS

Along with various types of theses, academic research outcomes are also published in other forms known as genres of scientific literature or academic discourse, e.g. scientific monographs, research studies, journal papers, research projects (research proposals), and reviews. Research works that, for the first time, publish results of original scientific research are called **primary sources**. Research works that summarise and review primary sources to outline new directions in research are called **secondary sources**.

A. RESEARCH MONOGRAPHS

A monograph (from the Greek “mono” – single + “grapho” – to write, meaning “writing on a single subject” is a research work usually written by one to three authors and presented in the form of a book (with the extent at least 3 quires). Its main purpose is to introduce **results of original research and scholarship**. Monographs are primarily intended for other researchers and experts, although they are often used by more skilled HE students as information sources. The significance of a monograph depends on various aspects such as author’s international recognition, number of citations or the publisher’s prestige. Generally, monographs released by universities are seen as more prestigious than those published by commercial publishing houses.

B. RESEARCH ARTICLES (JOURNAL PAPERS)

A research paper is a full-length (app. 9000 words) text which introduces results of original research and which undergoes full peer review before being published in a research journal intended for a specific research community. Nowadays, double blind peer-reviewed journal articles are the most frequent research works and in some circles and by some databases they are considered the most prestigious.

Research articles can have various formats, though the most frequent is the general IMRAD scheme.

IMRAD	
I = Introduction	Why was the study undertaken? What is already known about the topic (literature review) and what remains to be explained? What is the research question? What is the hypothesis?
M = Methods	How the research has been designed? Why particular research methods have been chosen? What equipment, processes, or materials were used?
R = Results	What is the answer to the research question? What is the new knowledge? Was the hypothesis verified?
A = and	
D = Discussion	Do the new results agree or disagree with the previous knowledge? What are the perspectives for future research?

TABLE 8.4 General IMRAD Scheme

Top tips from research journal editors: How to get published?

Writing for and getting published in academic journals is not always an easy process. On the contrary, it can be highly competitive. *The Guardian* (2015) published the collection of practical tips and advice from editors of established research journal how to structure a paper and deal with reviewers. Here are some of them:

- Focus on a story that progresses logically, rather than chronologically.
- Don't try to write and edit at the same time.
- Don't bury your argument like a needle in a haystack = be clear and provide clear arguments.
- Ask a colleague to check your work.
- Get published by writing a review or a response, especially if you are in the early stage of your academic career.
- Don't forget about international readers.
- Don't try to cram your PhD into a 6,000 word paper.
- Pick the right journal: it's a bad sign if you don't recognise any of the editorial board.
- Always follow the correct submissions procedures.
- Make sure that it is clear where your research sits within the wider scholarly landscape, and which gaps in knowledge it's addressing.
- Don't over-state your methodology.
- Respond directly (and calmly) to reviewer comments.
- Revise and resubmit: don't give up after getting through all the major hurdles.
- It is acceptable to challenge reviewers, with good justification.
- Remind yourself that when you read other published papers you only see the finished article.

Researcher must be an eternal optimist. Remember that any review aside from simply "reject," is a positive review:

- **Accept:** means "Perfect, this almost nobody gets".
- **Accept with revision:** means "Just make some minor changes."
- **Revise and resubmit:** means "They're still interested in you!"
- **Reject and resubmit:** though not as good as revise and resubmit, "they still want the paper!"

c.f. Hewlett, 2002

C. RESEARCH PROJECTS (RESEARCH PROPOSALS)

The research project provides a detailed description of the future research including its schedule. It is intended not only for the tutor or institution providing funds for the research, but more importantly for the authors themselves. Creating a research project requires systematic and critical thinking and helps avoid randomness and improvisation.

When composing a research project proposal, Brannan et al. (2013) recommend the following sequence of steps:

1. Develop an idea
2. Formulate the research question
3. Review the literature
4. Set the objectives and hypotheses
5. Construct a methodology
6. Create a proposal
7. Secure funding
8. Seek approval from the institutional review board
9. Collect the data
10. Analyze and interpret the data
11. Prepare the data for publication

FIGURE 8.2 research project proposal - sequence of steps (Brannan et al., 2013)

The **research project (proposal)** typically has the following structure:

1. **Title, author's name, institution**
2. **Introduction: motivation that led the author to select the particular topic and a brief description of it**
3. **Review:** review of the already conducted research, methodology and results, critical analysis of literary sources and definitions of key terms
4. **Research problems, research questions and hypotheses:** if necessary since there might be a thesis where hypotheses cannot be formulated – descriptive research
5. **Studied material/respondents:** what or who will be studied, numbers, characteristics that will be relevant for the research, e.g. texts that will be analysed, cultural issues that will be compared, students that will be observed (their age, gender, number, school they attend, interests, previous language skills, etc.)
6. **Research methods/research instruments: which methods will be applied, why, which instruments will be used, what is the objectivity, validity and reliability of the methods and instruments being used?**
7. **Time organization: schedule**
8. **Bibliography**
9. **Appendices**

TABLE 8.5 Research Project Proposal Structure

The given structure is just a model. Any concrete structure depends on the objectives of the research and on the study field, as well as the requirements of the supervisor/university/institution.

D. REVIEW

A **(book) review** is a brief (up to 4,500 words) critical report or unbiased evaluation of a current research work.

8.4 LANGUAGE OF RESEARCH WORKS

Majority of research journals are published in English as an academic lingua franca. Consequently and regardless of the quality and importance of their research results, the scientists who cannot communicate in English or whose academic writing skills in English are not sufficient may face many problems when trying to publish in international journals.

The influence of English is seen not only in the “globalisation” (unification) of academic language and style, but also in the unification of its composition (c.f. Pokrivčáková, 2005). Čmejrková et al. (1999, p. 25) state that particular culturally-determined scientific communities have developed their own stylistic norms of academic discourse (in lexis, syntax, composition and style). Clyne (1987) compared various elements of German and Anglo-American academic discourses and found out that while the authors in Anglo-American discourse made strong effort to keep their research papers clear and comprehensible, German authors pass the full responsibility for comprehension on readers. “Keep it clear and simple!” is becoming the universal motto of researchers all around the world.

CONCLUSION

The chapter a) characterises what academic research is, b) provides a fundamental guidance to novice researchers how to conduct academic research (including the recommended academic research procedure and characteristics of basic types of theses), and c) introduces terminology that enable novice researchers to be better oriented in international interactions related to the publishing of research papers and reviewing processes (including the brief classification of research papers and practical tips for their authors).

QUESTIONS & TASKS

1. Choose a model research paper (journal article) from your research field and analyse its composition answering the following questions:
 - a) What is its main idea? Is it expressed in the title?
 - b) Who are the authors? Are they reliable? What can you find out about them from the text or from the internet?
 - c) What is its objective? Is it expressed in the abstract?
 - d) Does the paper’s structure follow the “IMRAD” form?
 - e) What are the research questions?

- f) What research methods are used?
- g) Is it primary/secondary; basic/applied; quantitative/qualitative research?
- h) Who are the intended respondents?
- i) What are the new findings?
- j) What was the impact of the paper? (i.e. expressed by the number of downloads or citations)

2. The frame parts of any research paper include: conclusion, abstract, short bio, references, title, appendix/appendices, résumé, contact address. Match each part with its description:

Abstract	the name of the paper
Appendix	brief info about the authors and their professional achievements
Conclusion	a brief summary of a research article in another language
Contact address	the last part of the research paper summing up its main points and new findings
References	a brief summary of a research article, it introduces the objectives and findings of the paper
Résumé	a list of other research works the author refers to
Short bio	the address where readers can contact the author/s
Title	any text or document added to the end of a paper (e.g. research instruments, questionnaires, interviews, illustrations, etc.)

3. Add the frame parts of the journal article (abstract, appendix, conclusion, contact address, references, résumé, short bio, title) into the IMRAD structure in the appropriate order.

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The chapter significantly extends and updates the text “Academic research” by Pokrivčáková (in Pokrivčáková et al., 2011, p. 7-20).

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