

Institute of Experimental Psychology Centre of Social and Psychological Sciences

Slovak Academy of Sciences

Information for Doctoral Study Applicants and Doctoral Students

(A Manual on How to Survive Doctoral Studies at the Institute of Experimental Psychology, Center for Social and Psychological Sciences, of the Slovak Academy of Sciences)

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1. What should I know before applying for a doctoral study program?

How am I suited for doctoral studies?

You should carefully consider whether a doctoral study program is suitable for you. We have prepared this informational guide to help you understand what you are committing to for the next three years of your life. For many students, applying for a doctoral program is just a way to delay deciding what they want to do after school. This doesn't have to be a bad reason—doctoral students receive a stable income through a scholarship, extend their student life, and learn many useful skills. However, knowing what kind of student supervisors usually expect and why might be still helpful.

Doctoral studies are a preparation for scientific and academic work. So, the first question you need to answer is whether an academic career would be enjoyable and fulfilling for you. You don't necessarily have to be a straight-A student, but if you didn't enjoy writing your bachelor's or master's thesis, then a doctoral program might not be right for you. It's important to realize that working on doctoral research will be way more challenging than planning research for a master's thesis. Therefore, before deciding to apply and contacting a potential supervisor, ask yourself the following questions:

- Do I enjoy reading academic texts in English?
- Do I enjoy thinking deeply about topics that interest only a few people around me?
- What did I enjoy most when writing my thesis? Did I enjoy planning the design of data collection, statistical analysis, thinking about the results, and writing up the findings? Is there any part of this process that I profoundly didn't enjoy? Which part?
- Did I take advantage of opportunities to engage in research during my master's studies? Did I participate in student research competitions, attend student conferences, or keep up with news in the field of research that interests me?
- What are my experiences and skills in writing? Will I be able to write in English? Am I willing to work on my writing skills and improve my English?
- Am I willing to work on a topic that I didn't come up with and adapt to the supervisor's focus, or do I have a clear idea of what I want to do?
- What is my frustration tolerance? How do I handle criticism of my work? Can I ask for help when I don't know how to deal with something?
- What are the main skills I hope to learn during my doctoral studies? How do I want to use my research experience?

Organization of PhD Studies

The Institute of Experimental Psychology (IEP) of the Center of Social and Psychological Sciences (CSPS) of the Slovak Academy of Sciences (SAS) is a research-only institution that has an agreement on cooperation in conducting doctoral studies with two university institutions. For information about current topics, conditions, and deadlines for entrance exams in the doctoral study programs for the current academic year, please visit the websites of the respective faculties:

• Faculty of Social and Economic Sciences (FSES), Comenius University in Bratislava, in the study program of Health Psychology: <u>http://www.fses.uniba.sk</u>

 Faculty of Philosophy, Trnava University (TRUNI) in Trnava, in the study program of Psychology: <u>http://ff.truni.sk</u>

What is the main difference if you decide to pursue your doctoral studies at FSES orTRUNI?

In both cases, the IEP is an external educational institution that ensures the scientific part of the studies—this will be your main study focus, largely determined by your supervisor. Therefore, the main difference lies in the organization of the study program, teaching duties, and some administrative procedures.

You can see which courses await you during your doctoral studies, for example, <u>here</u> for TRUNI and <u>here</u> for FSES. At TRUNI, you will typically have courses taught in blocks several times during the semester (usually on Fridays) throughout the entire study program, and you can choose which compulsory elective and elective courses you will take and in which semester of your studies. At FSES, compulsory courses are fixed, and you will have classes every week (usually on Tuesdays from 8:00 to 17:00) throughout the first year of the PhD program.

Pedagogical activities are also part of your doctoral studies. According to the Regulation of the Ministry of Education of the Slovak Republic 131/1997, § 5, point 1: "Part of the doctoral study program in full-time doctoral studies is performing pedagogical activities or other professional activities that contribute to the expansion of the doctoral student's expertise for up to four hours per week on average per year." Pedagogical activities also include assisting teachers (e.g., helping with evaluating written assignments, etc.), supervising, and reviewing bachelor's theses. You can see an indicative comparison in the section on Pedagogical Activities in Part 3: Doctoral Life of this Manual.

There are some differences in the deadlines for applying for the mid-study exam and defending the dissertation thesis. According to the Regulation of the Ministry of Education of the Slovak Republic 131/1997 (§ 10), a full-time doctoral student must apply for the mid-term exam no later than 18 months from the start of studies at their training workplace (the date of enrollment counts). At FSES, it is expected that you will apply for the exam at the end of the 2nd semester of the first year (early June), and the exams are held together with the defenses of dissertations in August of the same year. If you miss this, you will submit your dissertation project in the next (3rd) semester, but you will have to wait until the following August for the exam. At TRUNI, you usually submit your dissertation project during the 3rd semester (you can do so earlier), and the mid-term exam usually takes place within 2 months of the application. You should always check the specific dates for the given academic year in the schedules of both faculties.

Choosing a Topic and a Supervisor

There are several ways to choose a supervisor for your dissertation. If you know you want to continue with doctoral studies after completing your master's degree, it's a good idea to look at the available supervisors and their topics, or the research areas they focus on, several months in advance.

Whether you choose first a supervisor or a topic depends, on one hand, on the available research topics and supervisors at our institute, and on the other hand, on how much you have already thought about the topic of your research project. If you have narrowed your interests to a specific area of psychology (e.g., health psychology, research on intuitive judgment), you can look for a supervisor in that field and then fine-tune the specific topic together. Different supervisors have different levels of openness to students' own topics—therefore, it is advisable to contact a potential supervisor before

topics are officially announced (usually in December of the previous year at TRUNI, and typically in February of the same year at FSES). Alternatively, if you know you want to work with a particular supervisor, you can choose a specific topic according to their guidance and what they are currently working on. Even in that case, it is good to know how your potential supervisor works, and you can ask about this during a consultation before applying for the doctoral program. This will help avoid many misunderstandings and unrealistic expectations on both ends.

In general, we can summarize the recommendations for choosing a topic into four points:

- 1. Choose a topic you understand.
- 2. Choose a topic your advisor understands.
- 3. Choose a topic for which a recent, well-written literature review has been published (and read it at least five times).
- 4. Choose a topic for which you are willing to write an excellent literature review (so that it is even publishable).

The ideal dissertation topic lies at the intersection of what both you and your advisor understand, is trendy, not overly researched, but also not too unexplored.

At the IEP, every doctoral student must be part of a project team—typically in the same project as their supervisor. However, supervisors may be involved in multiple projects, so it's good to review all projects at the institute (<u>https://psychologia.sav.sk/en/projects/</u>). Therefore, the announced topic will likely relate to the objectives of a specific project or a broader research focus of a particular supervisor. The future doctoral student thus officially becomes a member of this grant project and a member of the project team; their dissertation will contribute to the project's objectives and be part of its results. Supervisors will guide the scientific part of the PhD studies so that your research can be published in renowned indexed peer-reviewed journals.

Things to consider when choosing a supervisor:

Choosing a supervisor is one of the biggest decisions regarding your research. Doctoral studies involve close scientific collaboration with the supervisor and potentially their other doctoral students, so it's important to know what commitment you are making for the next three years and with whom. Therefore, it's advisable to choose someone whose leadership style and personality align well with your work style and who conducts research in an area that interests you. Doctoral studies rely heavily on self-motivation, so it's undoubtedly beneficial if you enjoy your research.

The most common way to choose a supervisor—if possible and if you have personal experience with them—is to reflect on how much you enjoyed the courses they taught or whether you liked their style of lecturing or supervising final theses. If the supervisor did not teach at your (or any) university— which is the case for many of our supervisors—it is good to arrange a personal meeting to ask about their expectations and working methods. You can also check how many doctoral students have completed their studies under their guidance, their publication activities, whether their students stayed in academia or moved towards practice, or directly ask their former students about their experiences.

Why choosing the right supervisor is important and what to watch out for can be read, for example, <u>here</u>. To make your decision easier and to introduce our supervisors, we have also prepared this brief guide.

List of Supervisors at IEP CSPS, SAS:

Peter Halama, Google Scholar profiel

Vladimíra Čavojová, Google Scholar profile

Eva Ballová Mikušková, Google Scholar profile

Jitka Gurňáková, Google Scholar profile

Jakub Šrol, Google Scholar profile

Matúš Grežo, Google Scholar profile

Lena Adamus, Google Scholar profile

Martin Sedlár, Google Scholar profile

Checklist Before Applying for a Doctoral Study Program

- Choose a general topic and then think about the question(s) you would most enjoy working on within this topic for the next three years.
- Meet with a potential supervisor (this is especially important if you haven't met before) and discuss what they expect from you—even between submitting your application and the official start of the program.
- Start reading articles related to your topic. Ask your supervisor to recommend relevant articles/books.
- Consult at least once on the project required for the application before submitting it.

What if you want to change the topic of your dissertation after the admission process?

This is usually not a problem. You have the first year of study to clarify the wording of your research question – what you want to study and how. It is essential to have this clear no later than when you submit your application for the mid-term exam (usually at the beginning of the second year—TRUNI link to the current academic year's schedule) or at the end of the first year—FSEV—link to the current academic year's schedule. After that, you just need to fill out a form provided by the study department of the respective faculty and have it signed by your supervisor.

What if you want to change your supervisor?

Naturally, people have different working styles and different expectations from their collaborators. It might happen that you did not give as much importance to the choice of supervisor as to the topic, or some problems or incompatibilities only became apparent during the study. Various conflicts can arise in cooperation, and it is good to learn how to handle them. First and foremost, it is important to realize that although the doctoral student-supervisor relationship involves a certain power imbalance (as the supervisor is important for the success of the dissertation), you are not a powerless assistant to your supervisor. Supervisors care that your dissertation is good and successfully defended and that you

publish enough during your studies, as you are part of a project whose goals need to be met, for which your supervisor is usually—at least partly—responsible. Successful doctoral students are also a criterion for the allocation of further doctoral positions, so it's important to keep in mind that everyone involved is generally positively inclined toward your success.

Therefore, good communication is crucial, and if you are dissatisfied with something, you should discuss it openly with your supervisor as soon as possible and try to find a mutually acceptable solution. If the conflict becomes personal, making it difficult to address face-to-face, there is a mechanism for whom you can turn for help. The Institute of Experimental Psychology is part of the Center for Social and Psychological Sciences, which has adopted a document on the internal quality system for doctoral studies, defining the roles of the various participants in education. Besides your supervisor, you can also turn to the doctoral study guarantor, who is present at the institute, or to the head of the organizational unit.

How Will I Support Myself During Doctoral Studies? (Or Practical Questions)

Scholarship

Doctoral students, on the one hand, still have student status. This means that, as holders of an ISIC card, they are entitled to discounts, but they must cover transportation costs in full. On the other hand, unlike undergraduate students, they receive a regular scholarship, which is currently higher than the minimum wage.

Regarding the amount of the scholarship, the law states that a full-time doctoral student is entitled to a scholarship during the standard duration of the study program they were accepted into, according to § 54, paragraph 18 of the Higher Education Act, if they have not already obtained a third-level university education:

- **Before taking the mid-term exam**: The scholarship must be at least equivalent to the 6th pay grade and the first pay level of the special pay scale for university teachers and research and development employees, according to Act No. 553/2003 Coll. on the Remuneration of Certain Employees in the Performance of Work in the Public Interest and on the Amendment and Supplementation of Certain Acts, as amended (hereinafter referred to as the "Remuneration Act for Certain Employees"). Currently (2024)¹, this amount is EUR 1,025.50.
- After taking the mid-term exam: The scholarship must be at least equivalent to the 7th pay grade and the first pay level of the special pay scale for university teachers and research and development employees, according to the Remuneration Act for Certain Employees. Currently (2024)², this amount is EUR 1,194.

According to § 9, paragraph 2, letter j) of Act No. 595/2003 Coll. on Income Tax, as amended (hereinafter referred to as the "Income Tax Act"), a doctoral scholarship is income exempt from tax, i.e., the doctoral student does not pay tax on the scholarship, and the scholarship is not included in the annual tax reconciliation or tax return.

According to Act No. 461/2003 Coll. on Social Insurance, as amended (hereinafter referred to as the "Social Insurance Act"), a full-time doctoral student is not considered an employee. For the purposes

¹ Please check the current rates.

² Please check the current rates.

of social insurance, a university is not considered their employer. This means that a doctoral student is not compulsorily insured under any type of social insurance. Neither the doctoral student nor the university pays social insurance contributions from the doctoral scholarship, nor does the state pay contributions on their behalf. More information about voluntary social insurance can be found here.

You do not have to become a doctoral student immediately after completing your university studies, and you may find yourself in different life situations. Therefore, it is advisable to find out individually about issues related to the payment of health and social insurance, entitlement to maternity or parental benefits, and similar matters, as laws can change. At the Institute of Experimental Psychology, we are flexible and strive to approach each doctoral student individually. So far, only a minimal number of our doctoral students have interrupted their studies or postponed their dissertation defense (in the last 10 years, only 2 out of 23 doctoral students), and although working on dissertation research during pregnancy and motherhood is challenging, some of our colleagues have managed to overcome this challenge without interrupting their studies.

Accommodation Options

SAS offers doctoral students the possibility of accommodation in dormitories in Devínska Nová Ves and in the facility on Dúbravská cesta 9. The dormitory on Dúbravská cesta 9 has a relatively small capacity and is primarily intended for short stays of foreign students. Accommodation must be requested through the appropriate form, which is signed by the applicant and the statutory representative of the organization.

More information can be found at this address: <u>https://www.sav.sk/?lang=sk&doc=educ-accommodation</u>.

2. What Awaits Me After Being Accepted into a PhD Program and Initial Formalities

After successfully passing the selection process for the PhD program, you will receive an official notification of acceptance (or rejection) within a few days. Since the entrance exams are usually in June and the start of the PhD program is typically on September 1st of the following academic year, you will have several weeks of vacation, which can be used to familiarize yourself with what will be expected of you over the next three years.

Starting a PhD program is somewhat similar to starting a new job, so you will also have to deal with some formalities, some of which need to be completed before the actual start of your studies. Below is a list of documents you will need before starting, or at the latest, on the day you begin your PhD studies. But don't worry, our administrative staff is here to help you with everything. You will get to know them first, as they will guide you through the entire administrative process . You should stop by their office immediately after starting to sign all the necessary forms and request an official email address. This email will be used for external communication, and it will also ensure that you are included in the mailing list for the entire organizational unit or center.

Documents to be submitted before starting the PhD program, i.e., by September 1st!

- Official acceptance letter from the university
- Medical certificate of fitness for work
- Certificate of non-existence of debt— from the last employer or from the register of executions (Central Register of Executions, can also be processed electronically)
- Personal questionnaire

Documents to be submitted upon starting

- Copy of your diploma
- Bank account number for the payroll office—consent form
- Training records—Occupational Health and Safety (OHS), Fire Protection (FP)
- Ethical Code, Work and Organizational Rules—signature required
- Agreement on business trips (CP)
- Health insurance—each registers themselves

On the day you start your PhD studies, the head of the organizational unit will usually introduce you to the basic functioning of the institute.

Who We Are: Structure and Hierarchy

You are a doctoral student at the Institute of Experimental Psychology, which has been part of the Center of Social and Psychological Sciences of the Slovak Academy of Sciences (SAS) since 2015. Since 2022, all institutes and centers of SAS have become public research institutions (hence the abbreviation v.v.i. after the workplace name). Since 2015, the CESP institutes have not had their legal entity but function as organizational units. You can think of it as departments at universities.

When engaging in publication activities, it is always necessary to state the affiliation of the workplace, although it doesn't matter whether you mention the Institute or the Center. You will quickly get to know your colleagues at the institute within the first few weeks. You will meet colleagues from other organizational units at the annual joint event—known as the "Centrovica"—which takes place every year around April/May, lasts 2–3 days, and is attended by all employees.



CSPS SAS falls under the 3rd Department of Sciences. The organizational structure of CSPV SAS, v.v.i. is as follows:



Although we formally have departments at our institute, we mainly operate within research projects. Each research project has a principal investigator who coordinates the work on the project and the achievement of its goals. Projects typically last for 3–4 years, and every research staff member must be involved in at least one project, as all research funding, necessary materials (such as computer equipment, software), and work-related travel (conferences, trips to meet participants, etc.) come from these projects. Researchers are usually members of multiple research projects.

As doctoral students, you will also be part of a research team, which includes your supervisor, who is either a member or the lead researcher of that team. (An overview of the projects can be found on the website:https://psychologia.sav.sk/en/projects/.) Most likely, your dissertation project will address a specific task of a particular project.

Your immediate supervisor (and closest collaborator) is your advisor, and both of you follow the requirements of the principal investigator, who in turn reports to the institute's management.

The more information about the history, structure and current management of the Institute can be always found on our website: <u>https://psychologia.sav.sk/en/o-nas/</u>.

Practical Information on Daily Operations

Doctoral students have a separate room. Usually, students from the same year sit together, but within the doctoral rooms, you can rearrange seating if you agree among yourselves. You can also arrange the room according to your preferences.

Attendance must be recorded in a special Excel sheet each month. Additionally, upon arriving at work, you need to sign in the Attendance Book, which is located near the secretary's office.

Institute days are Mondays and Wednesdays, so you are expected to be physically present at the institute, located in the SAS campus at Patrónka in Bratislava, at least between 9:00 a.m. and 2:00 p.m. on these days. What does an institute day mean? It is a day when all employees are usually at the institute, so it is a good time to handle administrative tasks, attend research team meetings, participate in seminars, or join informal gatherings. Of course, you can come to the institute on other days if you want to work without interruptions and social distractions—there will likely be fewer people at the institute, giving you more space for deeper concentration.

However, this does not mean that work is not done outside of institute days—quite the opposite. The institute allows for teleworking (aka homeoffice), and you should document what you have been working on during the month in the attendance reports, which are submitted at the end of each month to the secretary's office. The content of your work is arranged with your supervisor. The first year of doctoral study can paradoxically be stressful due to a lack of external structure, so it's good to meet regularly with your supervisor, but more importantly, to set your daily schedule yourself (more on time management below).

As students, you are not employees, so you do not have an official entitlement to vacation; therefore, you must report any absence from the workplace to your supervisor. The most common reasons for absence from the workplace on institute days are illness and doctor's visits (you are entitled by law), data collection in the field, and business trips (usually for conference attendance). Given the significant time flexibility of scientific work at the institute, it is good to learn to structure your time around work tasks right from the start. It's also good to recognize that, although as students you have holidays, this does not mean two months off like during your master's or bachelor's studies. It is, of course, good to plan for regular rest periods, but remember that you actually have only 33 months until the submission of your dissertation, so it might not be rational to do nothing for six months.

Although institute days are only on Mondays and Wednesdays, as doctoral students, you are also expected to participate in some institute activities that may take place outside of institute days or the 9:00 a.m. to 2:00 p.m. time frame, such as during Researchers' Night, Science and Technology Week, or when organizing conferences or workshops. You will also be expected to participate in some activities organized by the respective faculties (e.g., assisting with admissions for bachelor's and master's programs, helping prepare department-organized events, etc.).

Doctoral students are also expected to participate in Seminars—every staff member, including doctoral students, is required to present at least once a year. This can be a research report, information on an interesting methodology, or a presentation of a research proposal. Doctoral students usually present at institute seminars at least three times: at the first seminar after the holidays, new doctoral students introduce themselves (this is not a full seminar, just a brief introduction of what they will focus on during their three years of doctoral studies and something personal), in the second year, they have an internal defense of their project, and in the third year, an internal defense of their dissertation. If interested, additional presentations by doctoral students at professional seminars are welcome beyond these three required occasions.

The institute also hosts various informal ad hoc groups, which we call "clubs," such as a book club (every second Wednesday of the month at 2:00 p.m.), a film club (first Monday of the month at 2:00 p.m.), a swimming club (summer only), etc. Participation in these is not mandatory, but we highly recommend socializing and informal mentoring with doctoral students and researchers from other projects or institutes. As doctoral students, you can also participate in the activities of the <u>SAS Young</u> <u>Scientists</u>. It is interesting to see how others work—whether doctoral students or more senior

colleagues—and it is an opportunity to gain a lot of knowledge from other topics, and exchange experiences with publishing, journals, work systems, etc. Such informal groups are also very supportive if you get stuck in your research or have problems with school or your supervisor.

Financial Support for the Scientific Part of the Study

Each PhD student is entitled to receive computer equipment (we do not recommend using personal equipment for security reasons related to the entire SAV network). You can finance your needs either from the funds allocated to each PhD student for their research (so-called scientific education funds; currently 60 Euros/month/student, a total of 720 Euros/year/student), or from a project that you are part of. PhD students can use their scientific education funds at their own discretion, and may also share these funds with other PhD students by mutual agreement. The funds must be used within the calendar year. All purchases of goods and services must be consulted in advance with your supervisor (if related to research and covered by the project) and/or the scientific secretary.

Purchasing computer equipment follows certain rules (we buy through an electronic marketplace), so even if you have enough financial resources either from the funds allocated for PhD students or from a project, you need to report the exact specifications of the selected equipment to the scientific secretary, who will create an order through the electronic system. The whole process can take 2-3 weeks.

For any purchases of goods and services, you must ensure that the supplier can issue an invoice (we cannot pay proforma invoices or advance invoices). In exceptional cases (or for smaller items such as materials like books or office supplies), you can also make purchases directly, and then have the cost reimbursed through the so-called "petty cash" system (you need to provide a receipt, and in the case of an invoice and payment from your account, proof of payment from your account).

If you wish to attend a conference, you need to register for it (usually after the acceptance of your abstract). Once registered, you must bring or send the payment details to the scientific secretary. Keep in mind that the processes take longer than when you pay or purchase something privately, so do not leave the payments until the last minute, and make the request at least 5 days before the deadline. After the payment has been made, you will need to book accommodation and arrange transportation (this is done on your own, respecting the Directive on the Provision of Travel Reimbursements for Business Trips and the principles of economical use of financial resources). The use of a private motor vehicle must be pre-approved by management, and costs are reimbursed only up to the price of a travel ticket to the given location. Before any trip, you must complete a Travel Authorization form, and before traveling abroad, you must also request advances (these are calculated based on estimated costs for accommodation, travel, and food allowances). You are also required to take out travel insurance before a business trip. The scientific secretary or administrative staff can help you with all matters related to travel orders.

Upon returning from a business trip, you must complete the travel expense report (therefore, keep all receipts and documents during the trip: hotel invoice with your name, travel tickets, boarding pass, proof of insurance payment, etc.; note: parking fees and taxis are not reimbursed). Administrative staff will assist you with this as well.

All payments, disbursements, and use of funds must be completed by November 30 of the respective calendar year. In exceptional cases, and after consultation with the scientific secretary, disbursements may be made after this date, but no later than December 15 of the respective calendar year.

If you don't want to rely on the funds from the so-called scientific education or on what your project leader allows, it's a good idea to apply for a DoktoGrant at the end of your first year of study (the deadline is usually the end of August in the respective year). You can receive a grant of up to \leq 3,000 per calendar year.

What do you need to do for that?

- Visit the website https://www.doktogrant.sav.sk/
- Register
- Fill out a simple application
- Submit it by August 31 of the given year

In addition to gaining experience in writing projects and receiving valuable feedback, you can also achieve greater independence in funding your project. More information about DoktoGrants can be found in the <u>Statute</u>, as well as in the <u>text of the current call</u> and on the website. All information needed to prepare and submit a grant application within the online system can be found in the <u>Applicant's Guide</u>.

One last warning: Don't leave the call until the last minute. The application must be signed by the Director of the Center, who is currently based in Košice, so it will take some time for the documents to be transferred between Bratislava and Košice. Be sure to add a few extra days to your schedule for this.

3. Doctoral Life: What will I do as a PhD student?

In this section, we will focus primarily on what you can expect at your external scientific institution (IEP CSPV SAS, v.v.i.). Expectations regarding your study and teaching activities are governed by the respective cooperating university workplace (FSES or TRUNI).

Scientific Activity

During your doctoral studies, it is expected that the main focus of your work will be your dissertation research. The dissertation is more extensive than a master's thesis and is expected to make an original contribution to psychological theory. It typically includes at least 2 to 3 independent but related studies—although this largely depends on your specific topic and agreement with your supervisor.

To be eligible to defend your final dissertation, you must have at least one publication listed in the WOS/Scopus databases that has been accepted for print at the time of submitting your application for defense and handing in your dissertation. (We will discuss what an indexed publication means later.) Given that the review process can take several months, along with the time needed for analysis and writing up results, as well as planning, designing, and collecting data, it is recommended to start thinking about publication no later than the end of your first year of doctoral studies.

A few practical tips for the start of your studies – the kind you'll find in all the guides, but most students tend to underestimate them and later regret not starting sooner:

- Thoroughly learn the methodology.
- Study the most cited/important articles that use that methodology.
- Pay attention not only to the content but also to the writing style and how arguments are presented.
- Start... RIGHT AWAY!
- Write down everything you read. (The way you manage literature and notes is individual, but there are plenty of tools available today to make this easier, such as Zotero, Mendeley, etc.)

It's important to clarify your research question as early as possible. A good research question must first and foremost be relevant—it should address a real problem where a psychological approach can be helpful. It's also useful if the problem is significant enough, in other words, worth investing resources into solving. A good research question should be interesting—there should be someone who could benefit from your findings. The research question should also be testable (there should be a way to answer your question) and novel—it should contain an element of originality so that your work contributes to scientific progress and fills a gap in knowledge. Beyond these requirements, it's also necessary to consider the practical aspect of the research question.

Let's illustrate this with an example. Imagine you want to know more about why students in your class are late to lectures, and you formulate your research question as: "The relationship between student life and lecture attendance." This isn't a great research question—in fact, it's not even a question. So, you go further and reframe it as a question that interests you: "What factors affect student attendance at lectures?" This is still not ideal because even if you find several factors, how can you be sure you've identified them all? There could be thousands of more important factors you haven't considered. So, you think about the most likely factors influencing attendance: "Does the way students manage their

time affect lecture attendance?" This is a better question because you can answer it with "Yes/No." But what is "time management"? Your key variable is too vague, very unspecific. So, you narrow it down and focus on the effectiveness of reminders: "Do mobile reminders affect lecture attendance?" This is a good question—for empirical research. You can answer "Yes/No" and also point to a psychological mechanism—reminders as a counter-strategy against forgetfulness, procrastination, etc. However, if you also want to demonstrate causality, the problem is that the main variable you're interested in (setting reminders) is beyond your control. So: "Do email reminders from the teacher affect lecture attendance?" If you want to experiment, here is your research question. For example, you can send reminders to half the class and not to the other half, then count what percentage of students from each group attends the lecture. However, in psychological research, it's important not only to demonstrate the effect of one variable on another, but ideally also to explain the psychological mechanism behind why it works. In psychology, research is usually guided by some theory we want to test, or we try to explain some results by formulating a psychological mechanism, which we also need to test. In the case of this example, it would be good if you also had an idea about why reminders from the teacher might work.

So, in your research question, you can focus on these aspects:

- **Curiosity** Maybe you've read or heard about something and thought about it → How does it work?
- Inefficiency Sometimes you may get frustrated with something that doesn't work well → Why do they do it this way? Is there a better way?
- **Truth-seeking** Sometimes you may feel like someone is wrong → I don't believe what they're saying! Is it really the way they said?
- Competing conclusions Sometimes there are two ideas/theories that contradict each other
 → Who/what is lying, and who/what is telling the truth?
- New theories Sometimes you find an appealing theory that makes clear predictions, but no one has tested it yet → Is it a good theory?
- New applications of theories/knowledge → Does it work in my environment too? Is it applicable here?
- Articles that really need a replication study Maybe because of small sample sizes or outdated methodology → Your hypotheses, my design/data will your results still hold?

So, once you've found a research question that is sufficiently relevant, interesting, important, testable, and novel, it's good to make sure it passes these four golden rules:

- 1. Can it be answered within 3 years?
- 2. Is it (sufficiently) feasible to recruit participants for the research?
- 3. Can ethical approval for the research be obtained?
- 4. Is it not prohibitively expensive to conduct?

When you have defined your main research question, you can break it down into smaller objectives (see the table).

Research question:									
Objective	Description	Method							
1.									
2.									
3.									
4.									

Each sub-objective should address one aspect of the research question, and the objectives should follow one another in a logical order. Each objective should be possible to write up in the form of a journal article. The first objective is usually a literature review to determine what has already been researched on the topic so that we don't have to reinvent the wheel. The next objective could involve replicating previous findings or verifying the validity and reliability of measurement tools.

Indicative Study Schedule

Below, we provide an indicative Gantt chart for a sample study timeline. However, it is advisable to follow the current schedules for the relevant academic year at the respective faculty: <u>TRUNI</u> and <u>FSEV</u>, so you are not caught off guard by early submission deadlines for dissertation projects and theses. It's also important to remember that before submitting the project or completed dissertation, it is customary at the IEP to have an internal defense with an internal reviewer. This means you must subtract at least 2 weeks from the final submission deadline of the project or dissertation to allow time for the internal defense, for the reviewer to read and comment on your work, and for you to incorporate the feedback before submission. Therefore, do not leave the writing to the last minute—feedback from internal reviewers and colleagues during the internal defense can help you catch many deficiencies and avoid unnecessary stress during the final defense.

The indicative Gantt chart assumes that both at FSEV and TRUNI, during the first year in the winter semester, you will take courses that will prompt you to think about the project and the pre-registration of at least the first study, which will help you have the project ready by the end of the first year. It is also wise not to leave writing the first article until the end of your studies when you will already be stressed with writing your dissertation. Considering that the study programs at FSEV and TRUNI require you to have at least one article published (or at least accepted) in an indexed journal before applying for the dissertation defense, it is recommended to submit the first article for review no later than the middle of the second year, ideally during the first year (more on the publication requirement below).

	Year1				Year2				Year3			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Review of literature												
Study part FSEV	PR		PRO	SKU								
Study part TRUNI	PR					PR O	SKU					
Dissertation												
										DP-I	DP-E	ОВН
Study 1												
Conceptualis ation & Design												
Writing-up		RR										
Revisions					IPA							
Data collection						DC						
Analysis of results/ Writing-up												
Revisions2									MAN 1			
Study2												
Design & materials												
Data collection			DC									
Analysis of results/ Writing-up												
Revisions							MAN 2					
Štúdia 3-X (main study)												

Design & materials							
Data collection				DC			
Analysis of results/ Writing-up					MAN 3		

Legend:

Deliverables. PR: pre-registration, IPA (in principle acceptance for Registered Report), PRO: project of dissertation thesis, MAN: submitted manuscript, DP-I:dissertation thesis – internal (mock) defence, DP-E: dissertation defense

Milestones. SKU: mid-termexam, RR: aims of dissertation/Registered Report, DC: data collection

Checklist at the End of the Summer Semester of the 1st Year

- Literature review
- Plan of individual studies and their pre-registration (or submission of a registered report)
- Data collection(s) approved by the Ethics Committee of CSPS SAS
- Submission of the dissertation project
- Internal defense of the dissertation project

Checklist at the End of the Summer Semester of the 2nd Year

- Completion of the mid-term exam
- First data collection
- Submission of at least 1 article (or IPA for a Registered Report)
- Participation in at least 1 international conference together with your supervisor

Checklist at the End of the Winter Semester of the 3rd Year

- All planned data collections completed
- All preliminary analyses completed
- At least 1 article accepted in an indexed journal

Writing

Scientific work is not just about conducting research – identifying problems, formulating research questions, designing studies, and analyzing results. It is also about communicating those results to both experts and lay audiences. Therefore, it is essential to view writing as an integral part of scientific work, not as a necessary evil at the end of an interesting study.

There is a vast amount of literature on the specifics of scientific writing, and during your studies, some of you will also take courses on academic writing skills, where you'll learn more practical tips and recommendations. Here, we want to emphasize that writing is thinking – don't neglect it and don't leave it until the last minute!

Start writing before you know exactly what you want to say. Often, it's through writing that we discover what we truly want to express and how to say it, or whether what we thought were brilliant and clear arguments are actually confused and poorly formulated ideas. Writing takes time!

Especially if you want to produce quality work, **writing requires time**. Quality work is a text that fulfills its potential, meets the expectations you, as the writer, have set, and most importantly, communicates effectively with the intended reader.

Take notes (ideally in one place, whether in a physical notebook or a single file on your computer) to keep track of your ideas and sources. Don't rely on your memory!

Most research projects build on or extend the "literature," meaning the existing body of published articles (and books) on a given topic. Whether you're improving an existing model, using richer data, or asking a slightly different question, most research in psychology operates at the edge of existing knowledge.

In psychology, articles are usually structured according to the IMRAD format (Introduction, Methods, Results & Analysis, Discussion), and what each section should contain to meet the latest requirements for replication and adhere to open science practices (more on that below) is detailed in the <u>JARS</u> (Journal Article Reporting Standards). Here, we will briefly summarize a few basic rules:

The introduction should typically answer the following questions: What is the purpose of the article? In other words, what is the article "doing"? What important psychological question is it trying to answer or explain? What is the article's contribution, and how does it relate to previous literature on the topic? Present your topic and explain why it is important. Why should we care about it? Why is it relevant to psychology or human well-being?

A good literature review is a record of previous research, but the paragraphs are carefully crafted to tell a specific story. The story is usually this: Here's what researchers have done in my field in the past; here's what's unsatisfactory, incomplete, or troubling in that research – and I aim to fix it with my work. The purpose of the literature review is, in a sense, to sell your work – to highlight its added value.

The description of data, models, methods, and results is where you should actually start when writing your paper. We first conduct empirical work and then write the story around the selected tables and graphs. We gradually expand the paper outward in both directions – toward the introduction and conclusion. These two sections are written last: it's impossible to write them until the author knows what the paper contains.

A table cannot "speak for itself." Instead, you should explicitly point out the key findings you discovered in the data. You can also highlight counterintuitive results or those that are particularly large or small. However, you shouldn't comment on or restate all the information contained in the table. Instead, you are expected to direct your readers to the "meaning" or your interpretation of the results. What do you most want your reader to take away?

Many topics that interest psychologists have practical implications. However, you should avoid writing in a way that suggests "this should be done" or "this should not be accepted." Instead, avoid value judgments and rely on facts and analyses. Even if you have drawn your own conclusions about which policy is desirable, your reader should be able to weigh the facts and make a decision for themselves.

When discussing your results, you should also point out the limitations of your research, such as a relatively small number of observations or the simplicity (limitations) of the function you tested. You may also suggest questions or alternative approaches for future research.

The conclusion, like the introduction, is written after the core of the article has been completed. Conclusions are, in a way, an inverted version of introductions: while introductions usually build toward your theses, in conclusions, you usually start with them.

The conclusion is your chance to summarize your arguments clearly and concisely, without simply repeating what has already been said. It is also where you can suggest future directions for research or broader implications of the topic and findings that you didn't have space to explore earlier.

Most psychological articles include an abstract, a one-paragraph condensation of the main points of the article. Abstracts are short – typically around 150 words, with a maximum of 250. The content of an abstract may vary, but it often includes what the paper investigates, what data and methodology it uses, and what the main findings are. What you decide to include in your abstract should depend on the contribution of your work. If you could only summarize it in 150 words, what would you say?

Citing the sources you use in your work is a matter of honesty, credibility, and courtesy.

To sum up, a research project must answer these important questions: What phenomenon is the researcher trying to understand and explain? What explanation (mechanism) does the researcher propose for this phenomenon? What exactly do the terms used in the explanation mean? What specific hypothesis regarding two or more variables will be tested? How will the observations be analyzed?

Expectations Regarding Publishing During Doctoral Studies

According to the Internal Quality Evaluation System for Doctoral Studies at CSPS SAS, a graduate of the doctoral program acquires the ability to gain the latest knowledge in their field, expand the scope of knowledge in that field through their scientific research activities, and apply it in relevant areas of practice. These skills are acquired, among other things, through practice in publishing scientific studies, with the number and level of these studies at the end of doctoral studies corresponding to the requirements of the specific study program. Furthermore, a doctoral graduate at CSPV SAS is required, by the time of the dissertation defense, to have at least one publication with more than 50% authorship contribution in a journal indexed in the WoS or SCOPUS databases (a study that has not yet been assigned to a specific journal issue but has been definitively accepted by the journal's editorial office may fulfill this requirement if the doctoral student can credibly demonstrate its acceptance by the editorial office, for example, through communication with the editors or by being published in an

"online first" format), and another publication in a scientific (demonstrably peer-reviewed) journal or collection. In applying this rule, a publication from a "higher category" can replace a lower-ranked publication.

Meeting these expectations is not only a condition for completing doctoral studies but is also essential for your career growth if you wish to continue working in academia and/or research. Your publications (also known as your track record) are what will most interest any future academic employer (including IEP).

Publishing the results of your scientific research can be frustrating and will test not only your scientific skills but also your mental resilience, planning skills, time management, priority setting, and work ethic. Your supervisor is usually your main co-author and is responsible for guiding you through the turbulent waters of academic publishing, but you can also learn a lot from other colleagues. Keep in mind that your approach to every phase of scientific work—including writing and adhering to the deadlines agreed upon with your co-authors or supervisor—forms part of your scientific reputation.

Ethics Committee

Every research project or study involving human participants must be submitted for review to the <u>Ethics Committee of CSPS SAS</u>, v.v.i. The application should include the following:

- The applicant's name
- Project title
- Description of the project/research (in the form of an abstract with a description of the main objectives, procedures, target groups, methods, and experimental manipulations)
- Description of the sample (including whether it involves a vulnerable population, the voluntariness of participation, and the recruitment method)
- Description of the benefits and risks for participants
- Description of how anonymity will be ensured, how the data will be handled, where it will be stored, and how it will be published (following Open Science principles)
- The application should also include the informed consent form and a detailed description of the debriefing process

Don't leave the application for the Ethics Committee until the last minute, as they also need some time to review the application and may have comments or requests for changes to be made.

Open Science

The Slovak Reproducibility Network—Community of Open Science is based at the IEP CSPS SAS. It was established as an informal association of researchers who aim to grow together in the transparency of their research (open science philosophy) and the implementation of current methodological-statistical research practices. Currently, we operate as a civic association and offer many tutorials and guides on how to conduct research more transparently and in line with modern practices. More information, blogs, and webinars can be found here: https://www.slovakrn.org/

Meeting with Your Supervisor

The optimal frequency of meetings with your supervisor is individual, but it should be regular and at least once a month. Doctoral students should keep records of these consultations and share them with their supervisors in a shared folder on Drive or Dropbox.

Meeting notes do not have to be long but should include: the date & time, attendees, agenda items discussed, and notes on them, and specified tasks with deadlines for both the doctoral student and the supervisor. Shared notes are useful because we often handle multiple issues at once, and it can be difficult to remember why we decided on a certain method, scale, or type of analysis after a few months. You can also refer back to what was agreed upon and monitor the completion of tasks. In case of a dispute with your supervisor, such records can help clarify what was agreed upon and why, reducing reliance on the possibly distorted memories of the involved parties.

In addition to meeting with your supervisor, it is helpful to build relationships with other colleagues at the workplace, who can assist with specific questions, whether they concern advanced statistical analyses, study design, writing advice, or journal selection. These interactions are facilitated by institute days and seminars (see the Operational Matters section) as well as informal events and conferences (more on this in the next section).

Teaching Activities:

Comparison between Trnava and FSEV:

FSEV: At FSEV, it is mandatory to teach one seminar per semester (6 ECTS for each seminar per semester). Additional teaching is paid. Doctoral students typically supervise around 3 bachelor's theses (3 ECTS for each) per year and have 5-10 thesis reviews (2 ECTS for each). For example, in the 2023/2024 academic year, first-year students had 10 bachelor's theses and higher-year students had 5-6 master's theses or some bachelor's theses. In the 2022/2023 academic year, first-year students had only 5 bachelor's theses.

TRUNI: At TRUNI, our doctoral students usually lead seminars by individual arrangement with the instructors. You can expect to help, for example, with grading written assignments and leading at least 1 to 2 seminars during your doctoral studies. Typically, more teaching can be expected at the beginning of the doctoral program, while in the final year, there is generally more time allocated for writing the dissertation. Regarding supervision and review of theses, doctoral students at TRUNI supervise only bachelor's theses (5-8 per year) and can expect to review a similar number of bachelor's theses annually.

Social Life and Networking

Although there is a widespread belief that scientists are introverted, prefer to work in isolation without the distractions of others, and are generally "weird," the current model in science is more collaborative. This means that there are very few areas where solving a problem requires just one person. Advances in measurement, statistical methods, and theory have made it difficult to evenly develop skills across all necessary aspects of scientific work. Therefore, collaboration and learning from others are crucial.

While the most important and closest colleague for PhD students is their supervisor, it is also important (at least for mental well-being) to build a community with other PhD students and senior colleagues. It's a good idea to ask older PhD students about their experiences and how they dealt with situations that arise during doctoral studies, as they can often offer better advice than your supervisor. They are also more likely to provide informal information about the study process that your supervisor may not know or may not consider important.

A great way to get to know the work and people at the institute is through professional seminars. As PhD students, you are expected to actively participate in these and give at least one presentation on a topic each year. Even if you're not brave enough to ask questions publicly at the seminar, you can quickly get a sense of the expertise of your colleagues and approach them after the seminar. Although scientists are often said to be reserved, in reality, most of us at the institute are happy to share our knowledge with someone who is willing to listen.

Besides meeting with colleagues, the social life of scientists primarily takes place at conferences.

For doctoral students, attending international scientific conferences is crucial for several reasons. First, these conferences provide an opportunity to present their research and receive feedback from experienced experts in their field. This feedback can be valuable for further development of their work and contribute to improving the quality of their research project. Additionally, international conferences allow doctoral students to build new contacts and research partnerships. These new connections can lead to future collaborations, the exchange of ideas, and potential opportunities for publication or professional growth. Moreover, attending international conferences enables doctoral students to gain an overview of current trends and topics in their scientific research field. This can be useful in shaping their own research interests and staying informed about the latest advancements in their discipline. Overall, participating in international scientific conferences is an invaluable experience for doctoral students, which can strengthen their professional profile and contribute to their personal and career development.

How can you find a conference that will be most beneficial for you? First and foremost, look for conferences organized by professional societies in your research area. Such conferences are held regularly—usually in two- to three-year cycles (some even annually). It's a good idea to ask your supervisor or other colleagues for recommendations (alternatively, you can check the archive on our social media to see which conferences we usually attend and find the one that best meets your expectations). Participation in an international conference is contingent upon the acceptance of an abstract, so ideally, you should already have some data collected that you can present.

Attending a conference requires significant financial resources—international conferences often have high registration fees, and depending on the location, you also need to account for travel, accommodation, and food costs. Therefore, when choosing a conference, an equally important consideration is the budget of the project you are part of. As PhD students, you often have access to discounted registration fees or the opportunity to apply for travel grants—these options should always be explored. Additionally, DoktoGrant and the funds allocated for scientific education can be helpful.

For PhD students (and postdoctoral researchers), it is also beneficial for networking to participate in summer schools or undertake a research stay at another institution. A several-month stay abroad is also a necessary condition for obtaining the Schwarz Scholarship if you wish to continue working at the institute. You can find open calls for various research mobility opportunities here: https://oms.sav.sk/aktuality/otvorene-vyzvy/.

Further reading and a few finak tips

Jessica Horst (2016). The Psychology Research Companion. Routledge.

Jonathan St. B. T. Evans (2016). How to Be a Researcher. A strategic guide for academic success. Routledge.

David Lindsay (2011). Scientific Writing = Thinking in Words. CSIRO Publishing.

Chris Chambers (2017). The Seven Deadly Sins of Psychology. A Menifesto for Reforming the Culture of Scientific Practice. Princeton University Press.

A few final tips:

- Doubt, doubt, doubt.
- Find financial resources yourself, don't expect them to fall from the sky.
- Learn from the best, ask them for feedback, accept criticism, and don't take it personally.
- Get to know people and their ideas attend conferences (like SEAM), workshops, and don't be afraid to invest in them (and yourself!) even from your own pocket.
- Strive to do your best, even if it's painful.
- Start right away.
