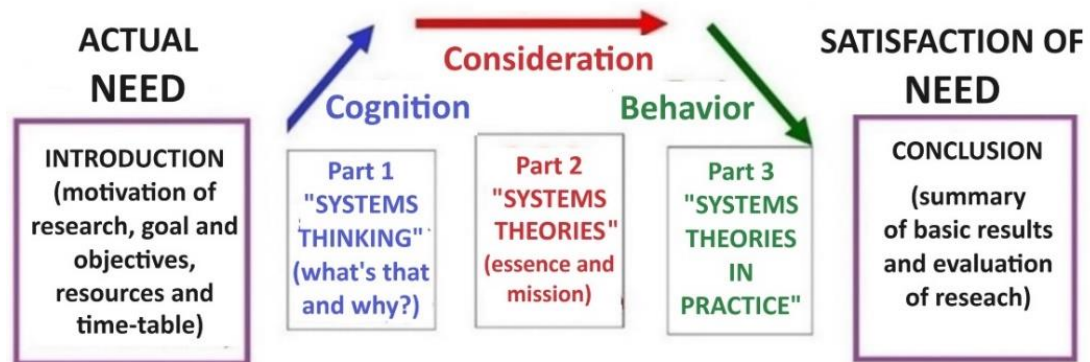


ST(1) 23-24 Methodical NOTES 28.12.23

METHODICAL advices and instructions for the realization of the study course and research project

A study course and corresponding research project, like any purposeful human activity, includes **three parts of the universal trapezoid**, which correspond to the three parts of the course and project.



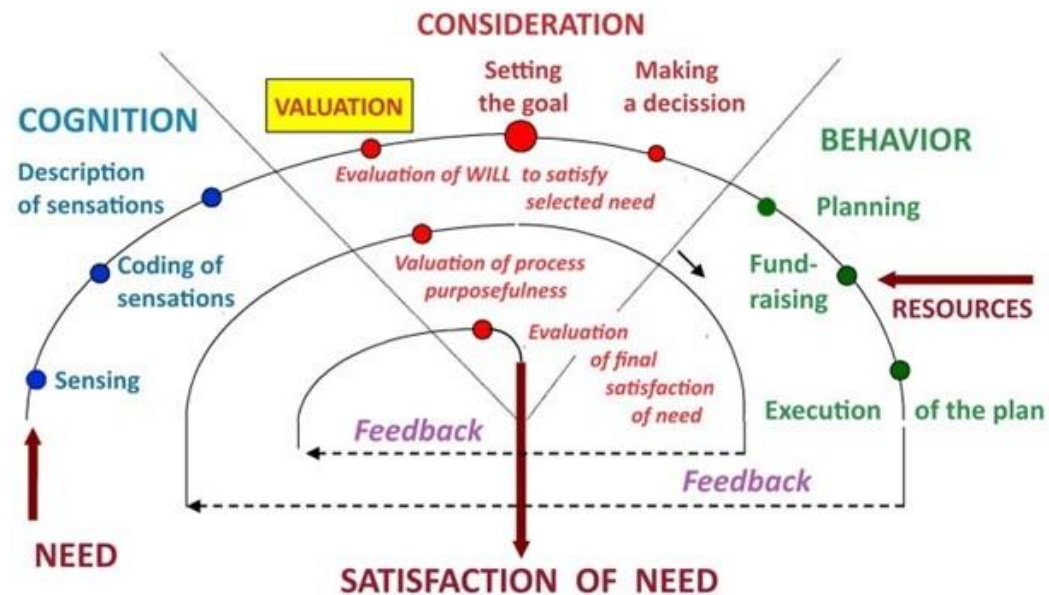
Part 1 - **COGNITION** (ascension) - exploratory or **fundamental research** activity (what is systems thinking and why?)

Part 2 – **CONSIDERATION**, which **evaluates the usefulness** of satisfying the needs identified in part 1, **establishes the goal** of the recognized human activity and the tasks subordinate to it as valuable, and **makes a decision** to start the following action – process of practical satisfaction of corresponding need.

Part 3 – **BEHAVIOR - ACTION** (descent) – a systemic applied study of a concrete phenomenon chosen by the student, which is connected to the satisfaction of a certain his/her life need. It means implementation of general systems theory within the practice.

Until 6.10.2023, I invite all students to develop and submit andris.broks@lu.lv their 1st control paper – draft of the INTRODUCTION to the final review of research project “Systems thinking”. It will be a personal test for each of you – I am just asking everybody to send me a copy of it so I can see your study process in development.

UNIVERSAL structure of H U M A N S purposefull LIFE ACTIVITIES



METHODICAL advices and instructions for developing the research review INTRODUCTION

The essence (vision) and mission of the INTRODUCTION of every research review is a short, clear and exhaustive (1-2 pages) answer to the question: what, why and how is being studied? In other words – **1**) what life need will the research satisfy? **2**) What is the goal and corresponding tasks of the research, what is the organization of the research (calendar planning, necessary funds)?

In other words, the INTRODUCTION of every research review must present a short, clear and exhaustive characteristic of the need to realize the corresponding research.. After that, the purpose and tasks of the research are formulated. Finally, the organization of the practical development of the research is described, presenting the calendar plan (timetable) of the research, as well as the necessary means - in our study process the corresponding sources of information should be mentioned. Of course, the initial draft of the research review introduction is refined during further development of the research

Let's note that INTRODUCTION of each research report will be commented within the final part of the research - CONCLUSION. All parts of the study are

interrelated, forming the study as a whole. All achievements of provided research should correspond to the goal of the research set in the Introduction. The final satisfaction of research process quality will be evaluated.

Finally, when revising and improving the draft of Introduction (6.10.23) as well the draft of the main part of total research review (1.12.23), pay special attention to strict requirement not to deviate arbitrarily from the research problem "Systems Thinking". Researchers should not ignore the 1st and 2nd parts of the study, but focus only on an independently chosen individual problem, which must be solved in the 3rd part of the research. A full-scale research review contains three parts and, of course, an appropriate introduction and conclusion, as well as the list of the sources of information what have been used (references).

Some comments related to the communication language of the Thinker as Writer and Speaker.

First of all, the words used in the written or spoken texts must be chosen very carefully - **do not use words whose meaning you do not know well enough**. Build the texts (starting with the sentences that make up the texts) as groups of appropriately interrelated words, because the research report is the whole, what is formed by words as coded thoughts with a clear meaning. For example, very often, instead of the word "systemology", the non-word "systematology" is used, and instead of the phrase "systems thinking", "systematic thinking" is used. Let's also distinguish between the meanings of the word group "systems theory" and the word "systemology". The set of words "systems theory" means the general systems theory. On the other hand, the word "systemology" means practical, applied systems theory as general theory of systems what is concretized for a certain branch of humans' life activities.

Secondly, I want to pay special attention to the arrangement (orderliness) of different languages used in our communication. Namely, Thinking is the process of arranging (ordering) the Thoughts) and circulation of words and sentences within the society. It means arranged (ordered) circulation of humans Thoughts as circulation of corresponding texts. Humans' communication manifests circulation of texts, prepared in different languages – socially developed conscious systems of signs to be transferred in space and time. Communication is fundamental humans living need to be satisfied. Successful full-scale humans' communication is

arranged (ordered) and meaningful too. Let us study and develop languages, based on meaningful (purposeful) creation and processing of Thoughts. Our study course can help you!

Today, the speeches heard all around us and the articles written demonstrate unsuccessful communication and cooperation of people because of unsatisfaction with the communication content (knowledge and attitudes) as well as the form. **This is a fact, but what is the cause?** **The answer seems to be quite simple: the low quality of the people's' communication and cooperation is based on the poorly arranged Humans' World of Thoughts (thoughts and thinking).** Unfortunately, many people do not understand this well enough, because they have never seriously thought about thinking, its leading role in Humans life. Arranged (ordered) thinking makes arranged (ordered) background for every particular Human's and Society's life as the whole.

However, but due to the limited time and the big number of students, I am not able to provide full-scale edition of your texts I am receiving from you. If it is necessary, I make only the most significant corrections or express appropriate remarks during our online meetings (seminars). Please improve your communication language mainly on your own because high school graduates have studied the literary language as well as the mathematical language for 12 years at secondary education level. Sorry, but the results today are very often not good enough to study in good or top-level Universities. I hope that this situation will be corrected by serious improving our verbal (and not only verbal) communication skills. We need to develop our Thinking and communication both by content and form.

The written review of the research project "SYSTEMS THINKING" as well the online public presentation of the corresponding report during examination period in January 2024 – 26.12.2024 will prove the successful progress within the development of your systems thinking as well as communication too.

Recommended structure of the research project REVIEW

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Sample of the review cover page

University of Latvia

Faculty of Study program:

Bachelor studies

Optional study course "Systemology of Thinking"

R E W I E V of the research project "SYSTEMS THINKING"

Student: Anna Kalniete anna.kalniete@inbox.lv

Professor: Andris Broks andris.broks@lu.lv

2023-2024

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Cover page and Table of contents

- INTRODUCTION (relevance, goal and tasks of the research)
- **Part 1. Systems thinking.** The fundamental part of the educational research, what is providing answer to the question: what is it and why "systems thinking"?
- **Part 2. Summary of the main concepts of the systems theories.**
- **Part 3. Systemologies as systems theories in practice.** The practical part of the educational research, showing researcher's answer to the question: how can I use the theories of systems thinking to satisfy the needs of my life?
- CONCLUSION (results of the study (main conclusions and proposals), self-evaluation of the study (emphasizing the new life experience obtained by conducting the given educational study) and prospective development of researcher's systems thinking in the future.
- List of thematic sources of information used in research (references).

Research results REPORT as public presentation of the summary of research REVIEW.

Report is the short, clear and exhaustive summary of the educational research review – researcher's set of his/her new life experience findings. Following discussion and evaluation of the report means final examination process of the course study results.

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University of Latvia, faculty , study program

Bachelor studies, optional course " Systemology of Thinking"

Report of the scientific study / research project "SYSTEMS THINKING"

Student :

Professor: Andris Broks

Riga, January 2023

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- Frame 1 Title page (title, author)
- Frame 2 Research rationale, purpose, tasks
- Frames 3, 4. The main findings obtained in the 1st part of the study
- Frame 5. The main concepts of systems theories
- Frames 6, 7. The main findings obtained in the 3rd part of the study
- Frame 8 The main conclusions and proposals of the study
- Frame 9 Main sources of information used (references)
- Frame 10 Closing page

University of Latvia study year 2023/2024 1st semester examination session takes place from Tuesday, 2.01.2024 till Friday, 26.01.2024.

Here is the timetable for our study course SDSK1034 Systemology of Thinking” exams.

This formal and now empty timetable will be filled personally in the order of receiving student applications. Send applications to andris.broks@lu.lv. I invite you to apply in time, choosing the examination day during the entire duration of the session and not waiting the last week of the session. You can follow the completion of the exam schedule on the course management blog <https://blogi.lu.lv/broks/>.

Both research review (in docx format) as well as report presentation material (in pptx format) should be prepared and **obligatory submitted not later than 3 days before the examination day. Each presentation and discussion of the report, answers to the audience's questions last up to 30 minutes, devoting first 10-15 minutes for researcher's online report.**

Friday, 6.01.24	Groupe No 1	10:30 -13:30	(5 students)
Friday, 6.01.24	Groupe No 2	16:30 -19:30	(5 students)
Friday, 12.01.24	Groupe No 3	10:30 -13:30	(5 students)
Friday, 12.01.24	Groupe No 4	16:30 -19:30	(5 students)
Friday, 19.01.24	Groupe No 5	10:30 -13:30	(5 students)
Friday, 19.01.24	Groupe No 6	16:30 -19:30	(5 students)
Friday, 26.01.24	Groupe No 7	10:30 -13:30	(5 students)
Friday, 26.01.24	Groupe No 8	16:30 -19:30	(5 students)

In cases of special need, extra-ordinary exam groups or individual exams can be organized. In special cases, the exam can be taken without an oral report presentation, but the visual material of the report must be obligatory sent in time together with the research report.

May all our work go well and be successful! Sincerely yours, the author and implementer of the study course " Systemology of Thinking " - Andris Broks, senior, professor emeritus of the University of Latvia