

THE FORMATION OF HABITS FOR THE SCIENTIFIC RESEARCH AT THE LEVEL OF THE MASTER'S DEGREE

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Abstract: *The dissertation represents an essential component in the evaluation of a graduate's ability to conceive and make an independent research, as well as to redact the research done according to the rules of the scientific community. This study synthesizes a few practical aspects connected to the stages of elaborating the dissertation, as well as to the demands regarding its writing and presentation of the paper in front of the examination committee. Within the sections, we will focus upon the methodical aspects of the activities mentioned, and upon the norms of ethical conduct that must characterize the whole research process demanded by the redaction of the dissertation paper.*

Key words: *dissertation, methodology, research, redaction, ethical norms.*

Introduction

As it is well known, the master's degree university studies must lead to the acquisition by the graduate of certain knowledge, abilities, theoretical and scientific research competences, which are to be attested through the elaboration of a dissertation. This type of paper must prove the advanced scientific knowledge of the elaborated theme, must contain elements of originality in the development and solution of the theme, as well as the means of scientific validation of the aspects presented. It also helps in the evaluation of the fundamental and specialized knowledge of the graduate, so that he or she can obtain a professional qualification.

It is important to highlight the fact that the dissertation does not only involve elaborating a scientific research, but also the graduates' ability to support the ideas that the paper contains, the ability to dialogue with the specialists in the field upon research subjects and their receptivity to suggestions or critique from the researchers regarding the theme approached.

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Referring to the field of socio-humane sciences, Mărginean (2000), Chelcea (2007), Bulai and collab. (2012) think that the choice of the dissertation theme must be connected to the following aspects: the proven interest of the graduate for the problem concerned, his abilities to operate with the methodological instruments applied to the research problem, the theme's utility for further development, the relevance of the research for problems of public interest, the practical possibilities of organizing an empirical research, as well as the demand of publicly presenting the results of the research.

Starting from these aspects, the graduate must evaluate his own possibilities of studying independently a research problem, of operating with the concepts and theories of the field of study, of conceiving and applying a research design referring to the theme proposed for investigation, but also to ask himself questions regarding his ability to prove theoretical themes and ideas, to critically approach the solutions offered in the speciality literature or connected to his ability to communicate the results of the research in an academic environment.

Attempting to systematize the aspects mentioned above, I will now present a model of conceiving the research in the field of socio-humane sciences, a model structured around three main stages: the thematic documentation and definition, the elaboration of one's own research theses and their argumentation, as well as the stage of empirical research (when the dissertation includes such an enterprise).

The stages of elaborating the dissertation

From the very beginning, we must stress the fact that the three stages do not involve a linear succession, but rather a "spiral" one, with returns to one stage or the other according to the adequacy of the investigation instruments and techniques, the solutions identified in the bibliography used, the conclusions proposed by some authors or by the comparison of the hypotheses as opposed to the results of the enterprise. However, we can retain the following more important sequences (cf. Eco, 2006; Simandan, 2010; Chelcea, 2010; Bulai and collab, 2012).

a) The documentation – It gives the graduate the possibility to formulate a theoretical conception upon the specific problem that is to be studied. Whether it is a bibliographical documentation or a field documentation, it serves in the formation of a theoretical conception upon the problem proposed for analysis in the dissertation paper, in the identification of the authors with relevant contributions for the chosen field, the delimitation of the studied problem, the establishment of the social indicators which are to be analyzed, as well as the selection of the research methods and techniques in similar studies and research.

Last but not least, the documentation leads to the identification of the main concept which one can use within the approach, the etymologic analysis of the “key” concepts in order to operate them, the theoretical developments consecrated in the given enterprise and the stage reached within the knowledge of the studied theme up to the moment of initiation of the research, the critical approach of the differences of opinions in order to clearly delimitate one’s own contribution.

b) From the practical point of view, the elaboration of the research enterprise refers to the formulation of theses and their theoretical and empirical argumentation. The theoretical relevance, for instance, “means the extent to which the paper brings a new contribution to the existing research or to what extent the research offers a perspective of novelty by applying some of the existing theories in a new field. The practical relevance refers to the degree at which, based on the results of the study, one can formulate recommendations with a significant practical utility for the developments on the market of the field of reference” (Bulai and collab., 2012, p.24).

All of these offer the possibility to define the research theme which is to be studied on the one hand, and on the other hand to determine the general objectives and the specific objects of the research carried on. Among the general objectives, authors such as King, Keohane and Verba (2000), Babbie (2010) and Chelcea (2011) mention the following: the description of the specific elements of a phenomenon; the determination of the manifestation frequency of a phenomenon; the formulation of explanations regarding the relations with other fields; the realization of a diagnosis regarding the impact of certain actions; the elaboration of predictions regarding the evolution of the phenomenon; the identification of solutions for founding certain decisions; the establishment of the action strategies from one field or the other; the evaluation of the possible effects of different actions; the estimation of the evolution directions of the factors of social change etc.

As opposed to the general objectives, *the specific objectives* must be formulated clearly and in a shape which is easy to understand before the start of the research. They must answer questions such as the following: Can the problem proposed be solved in a research process? Is it significant for the actual research? Which are the elements of novelty that it brings? How accessible is the necessary data for the elaboration of conclusions? Is there any practical experience for the planning and accomplishment of such a study? Is the allocated time sufficient for the proper finalization of the research? What risks could appear in the finalization of the research as a consequence of the possible difficulties and obstacles?

The aspects referring to the research theme choosing a method of elaborating the dissertation paper, the scientific practice from the field of socio-humane sciences consecrated the approaches of a descriptive type (used

in the formation of observations and conclusions about social phenomena with the help of quantitative and qualitative methods); of an empirical type (which involve the focus upon the practical relevance of some themes, as well as on the empirical testing of certain theses or theoretical models); of an experimental type (where one can verify the relation between two or more variables); of a comparative, historical or interpretative type.

c) If the first two stages are connected to the theoretical component of the paper, in the case of dissertations the component of empirical research is more important than in the case of the license paper. Because of this reason, the efforts made for the elaboration of the empirical research enterprise must also be greater in the case of the graduates of master's degrees.

Taking into consideration the purpose of this study, I will not approach the elements of methodology because they are analyzed in different activities in the majority of the master's degree university programs. For this reason, I will evoke the particular stages of the empirical research enterprise, the procedural aspects being further discussed by each graduate separately with the professor who coordinates the paper.

In the case of socio-humane sciences, the stages of the empirical research enterprise can be summarized as follows: the definition of the studied problem; the establishment of general and specific objectives; the elaboration of hypotheses; the definition of the methodology of collecting and processing of the data; the functioning of the concepts; the definition of the indicators used; the elaboration of the development plan of the field research; the actual field research; the analysis and interpretation of the data; the presentation of the conclusions; the specification of the possible errors or sources or errors (cf. Mărgineanu, 2000; Chelcea, 2007).

Before moving further, I would underline three major aspects which one must take into account in the evaluation of the elaboration stages of the dissertation paper: the first aspect concerns the graduate's planning of his activity; the second regards the verification of the research methods and techniques used to attain the objectives proposed; the third concerns the conformation to the norms of scientific ethics in the elaboration and redaction of the dissertation paper (cf. Haiduc, 2012).

The redaction of the dissertation

If the value of a paper is given by the results of the theoretical and practical investigations, this does not involve the decrease of the importance of the actual redaction of the text of the scientific paper. On the contrary, the redaction involves not only the issues connected to language and style, but also a set of rules which need to be applied in order to be able to valorise the efforts and results from the previous stages of the enterprise of elaboration of the dissertation.

Another category of problems which must be taken into account in the redaction process refers to the types of papers, where we can distinguish: those which make a critical synthesis of a subject and are included in the type of *bibliographic research* (where the graduate can prove his capacity of understanding certain problems which are already solved, as well as his evaluations upon different points of views); those which are achieved based on *field observations* (having the purpose of describing and explaining facts, phenomena, processes, behaviours, events etc.); those which are based on *experimental research* (a situation where the graduate highlights the analysis of scientific exigencies for the verification of hypotheses and the formulation of conclusions).

Even if there are *differences of approaches* between these types of papers, the stages and rules of redaction are similar, and the structure of the papers mentioned actually includes the same elements: the introduction, the main body of the paper (the description of the *design* of the research, data analysis and discussion), conclusions and bibliography.

By valorising the literature consecrated to these issues, I will first approach a few aspects referring to the redaction of the dissertation paper, after which I will insist upon the main rules which must be respected regarding the bibliographical references, quotations, assumed ideas, notes, comments and annexes. I add the fact that I will not analyze the technical aspects of the actual redaction of these papers, because those aspects are properly approached in the guides made available for those interested by the universities, faculties and research institutes.

Following this method of working, one must say that the main stages of the redaction are: the elaboration and completion of the redaction plan of the paper, the actual redaction of the paper and the completion of the redaction of the paper.

a) The redaction plan is a control measure which helps the author to verify the degree of inclusion of the problems connected to research, selection, ranking and redaction of the conclusions of the research along the whole elaboration process of the paper. It also ensures completion of the paper on time and complying to the criteria of quality through:

- The systematization and ordering of the ideas resulted after the scientific research according to their purpose and the type of paper.
- The structuring of the paper on chapters, sections and paragraphs in relation to the amplexness of the research developed, respectively the needs of successive, systematic and coherent presentation of the thematic of the paper.
- The conception of an introduction where one can identify the objectives of the research, the degree to which they had been attained or the problems left to be further approached.

- The distribution along the whole contents of the paper of the results of the investigations, the confrontations of opinions with other authors, the means in which the hypotheses have been confirmed or infirmed, the means of verifying the afferent calculi and analyses etc.

- The rigorous enunciation of the conclusions, as well as the means in which they associate with the theoretical and practical arguments.

- The identification of omissions in the sphere of documentation or of the calculi and taking measures to eliminate the repetition or insufficient argumentation of some of the problems analyzed.

b) The actual redaction of the paper consists in either the initial elaboration with an accent upon the content of ideas where one evaluates the result obtained in relation to the objectives proposed, or in more successive variants until one reaches the shape that best satisfies the scientific exigencies and those of content of a dissertation paper.

This time, it is essential to build the structure of the paper according to its main parts: the introduction, the main body of the paper, the conclusions and the bibliography. There are some very important aspects which must be remembered for this purpose:

- The introduction will identify the research theme, the field of interest and the investigation strategy. It must position the problematic of the study within the scientific field, to state the aspects that differ the research from other existing studies, the elements of originality that the paper brings and the objectives of the research. In the introduction it is also recommended to mention the criteria used in the comparative analysis of the data, the limits of the study, as well as the finality of the conclusions reached.

- The main body of the paper is made up of chapters and paragraphs which follow the same structure on their own scale: the introduction, the analysis and the conclusions. According to the conceptual frame of the theme approached, the paragraph must be consecrated to a single idea, the explanation of the idea must be coherent and sufficient, and, where possible, the paragraph must end with a conclusion.

Regardless of the length of the paper or the number of the chapters, some very important aspects must be remembered. *Firstly*, we are talking about the description of the methodology or *design* of the paper (the enunciation of the purpose, the description of the empirical material, the nature of the information collected, the means of collecting the data, the sampling method, the duration of the research, the evaluation of the research according to the achievement of the purposes), the verification of the correctitude of the data, the statistical analysis and the calculating procedures used (indicating the eventual errors, the degree of concordance in relation to similar research, critical observations priming the techniques used).

Secondly, we are referring to the analysis and interpretation of the data of the research, as well as its systematization under the shape of tables, graphics or figures. These graphic tables must be inserted in the text of the scientific papers, using to: explain the distribution of the frequencies, calculate percentages, establish relations between dependent and independent variables, identify significant associations and identifications between variables, and analyze the statistic results of the significant tests and so on.

Thirdly, we are referring to the interpretation of the research data, where an essential role is held by the logical organization of the ideas. From this point, one can chose from one of the following types of elaboration: analytical (decomposition into sub-problems), based on opposition (negative aspects – positive aspects), on causal reasoning (the identification of explicative relations), on deductive and inductive reasoning (from general to particular, from particular to general).

- The conclusions will summarize the contributions of the author to the knowledge of the theme approached, the perspectives referring to problem studied, the elements of theoretical and methodological novelty brought to the research done and the possibility of applying the results. A distinctive place must be held by the analysis of the limits of the investigation, the inconsistencies of the theories, the debates and controversies from the field studied, the interdisciplinary connections between the problems discussed, as well as the perspective of the research in the respective field. The 2-3 pages of conclusions permit the fixation of the essential ideas exposed in the paper and the answer to the problems proposed for solving by the author.

- The bibliography used and the citation of the bibliographical references are the objects of regulations which address both the editors and authors of scientific papers.

It includes not only printed materials (books, chapters from different volumes, speciality magazines, studies included in the volumes of conferences etc.), but also the electronic sources (articles and papers available online, websites etc.). Whether they refer to a book or an article, bibliographical resources from the end of a paper are inscribed in the alphabetical order of the authors, followed by the year of publication, the title of the paper, article or book and other elements of identification, according to the examples below:

Beck, U., 2006, *Living in the World Risk Society*, in “Economy and Society”, **35**, 3, pp. 329-345.

Chelcea, S., 2011, *Manual de redactare în științele socio-umane*, Bucharest, Comunicare Ro Publishing House.

Day, R.; Gastel, B., 2006, *How to Write and Publish a Scientific Paper*, 6th ed., Cambridge, Cambridge University Press.

Diamond, P.A., 2010, *Nobel Prize Lecture: Unemployment, Vacancies, Wages*,
www.nobelprize.org/nobel_prize/economics/laureates/2010/,
(accessed in 10.10.2012)

Hatos, A., 2010, *Educatia*, in L.Vlasceanu (coord.), *Sociologie*, Iasi, Polirom Publishing House, p.596-644.

- The annexes include calculi tables, diagrams, graphics etc. Which syntethtize data processing or calculus values needed in the analyses and interpretations from the stage of researching the theme. The annexes are included at the end of the paper and they are necessary only in the cases where the elements they include have not been used in the elaboration of the text. They have a special importance in the economy of the paper, because they permit a better understanding of the author's enterprise and a justification of the data used in formulating the conclusions.

c) The definition of the redaction – is based not only on the appreciations, the critical observations and the suggestions of different specialists (the scientific coordinator, teachers, researchers, practitioners of the researched field etc.) but also on the author's own analysis after completing the first form of redaction. Among the exigencies which must be respected are the following: the logical succession of the chapters of the paper, the relation between the importance of the problem approached and the extension of the chapters and paragraphs, the rigour of the formulation of the theses and the conclusions of the paper, the supported explanation of the statements made, avoiding to include useless details, the correctitude of the calculi and of the bibliographical references, eliminating the repetition of ideas, quotations and calculi, as well as ensuring stylistically and language unity.

The public presentation of the dissertation paper

The public presentation of the dissertation paper has the role of knowing ideas, theories or directions of scientific research, of affirming young researchers, of identifying the research fields which must be financially supported, as well as of reconsidering certain scientific theories and practices which are not actual any more. Each public presentation must be thoroughly prepared from the point of view of the content and of the form of presentation.

Under *the aspect of content*, the public presentation involves an operation of structuring the speech on the following sequences: the motivation of the choice of the subject, the objectives set, the objectives that the author considers to have been attained, the theoretical and factual argumentation of the methods used, the elements of personal contribution, the difficulties met in the process of research and elaboration of the paper, the aspects that couldn't be approached, what remains to be discussed by the author or by other researchers (cf. Rădulescu, 2006, p. 146).

Apart from these aspects, Lumperdean, Matiş and Mustaţă (2007, p. 7), suggest the need of a *differentiation of presentation* between papers focused upon the study of speciality literature, respectively of those studies based on case studies which are relevant for the field of research assumed by the graduate. In the first variant, one should focus upon the scientific research of the literature afferent to the research theme, upon the analysis of the knowledge study in the respective field of activity, upon the conceptual approach of the studied theme, upon the research directions which exist in the area of study and upon the general conclusions which can be identified based on the study made.

In the second variant, one should take into consideration the systematic and comparative approach of the existing situations in the research field chosen, the identification of common or different elements of the situations analyzed, the formulation of hypotheses with afferent factual argumentation, the avoidance of assimilating practical situations which can not make the proof of a scientific research based on the case study.

Under the *aspect of presentation form* of the scientific paper, the preparation consists in:

- The elaboration of a presentation plan of the paper, which must include: the degree of interest of the studied theme (actuality, novelty, originality), the author's contribution in relation to the researched theme, the critical analysis in relation to the theoretical support, the model of research used and the quality of the work procedure, the statistic processing of the data and the interpretation of the results, the redaction style (the clarity of the expression, the logic of the organization of the material, grammatical correctitude), the limits of the solutions proposed in relation to other researches.

- The preparation of the materials and auxiliary techniques (schemes, graphics, boards, posters etc.) starting from the idea that using them eases the exposition, avoids monotony and permits the conformation with the allocated time. A major role is held by presentations made in the *PowerPoint* system and under the form of posters, means which give the author the possibility to create a synthesis of the information, a selection of the methodological aspects, the accomplishment of an interpersonal scientific communication, the stimulation of dialogue and discussions upon the research presented, as well as a better highlighting of the activity developed by the graduate by combining visual and discursive means.

- The psychological preparation of the graduate (the anticipation of the questions, the conformation with the allocated time, the information about the ways of presenting the paper, the thorough grasp of the research methods and the bibliography used, the formulation of personal opinions within the discussions with the evaluation committee etc.) and the logistic preparation,

materialized in the configuration of CDs, slides, computers, printed handouts etc. The presentation of a paper with the help of *PowerPoint* must consist in 15-20 slides, numbered so as to permit control over the time of presentation, and the author must avoid reading the texts on the slides and the use of resonant effects along the presentation or graphic elements which have no connection with the paper.

Conclusions

As we have shown along this article, the elaboration of the dissertation is an opportunity to form and develop the research abilities of the graduates of master's degrees and a means of appreciating the true value of their way of thinking and operation. Through the cooperation with the coordinating teacher, the graduates form abilities of communication, of critically formulating and supporting ideas, as well as of elaborating a scientific paper. During the process of writing a dissertation paper, he has the opportunity to form abilities of critical analysis of the social reality, for identification of deficiencies and the means of diminishing or eliminating them. Last but not least, referring to an initiation in scientific research, the graduate of the master's degree will familiarize himself with the principles and norms of ethical conduct in scientific research, by respecting the practices consecrated in the ethics codes of the fields of socio-humane studies, by avoiding the different forms of plagiarism, as well as the legal regulations regarding intellectual property and copyright.

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