MODERN METHODS AND TECHNIQUES OF RESEARCH

Adina Săcară-Onița, Andra Teodora Porumb
Department of International Business, Faculty of Economic Sciences, University of Oradea, Oradea, Romania
ooadina@yahoo.com
acatarig@yahoo.fr, acatarig@uoradea.ro

Abstract: *The paper presents the modern methods and techniques in the philological research. Scientific research involves not only an individual activity, based on the information and data collection or the formulation of some innovative theses. It also involves communicating the results to a differentiated audience. One should find a purpose for the data collected: it should be taken over by their recipients in an accessible form. In other words, there must be a balance between the content of a research on the one hand, and the shape of the wording on the other. Being familiar with the steps to make in a research endeavour, and observing the rules developed to complete the research in the form of a scientific paper, are both secret ingredients of a successful endeavour. Scientific research involves, besides specialized knowledge, the mastery of appropriate working techniques. To be considered a scientific paper, a text must meet two fundamental prerequisites, namely: to bring something new and/ or to be useful. Between these extremely general boundaries, the scientific works take a wide variety of shapes, using a combination of several classification criteria. Depending on the fundamental approaching method, one may distinguishes the analytical method from the synthetic method. Size of the text is rather a more practical classification criterion than a scientific one. It influences the structure of the paper work only to a certain point. The modality of conveying the research paper influences the structure of the text only in the case of written - oral communication conflict. The paper presents in the end aspects about references, word processing typing and plagiarism.*

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JEL Classification: *I20.*

1. Introduction

In the research activity, it is very important for the researcher to prove high academic standards. To this end, and before writing a research paper, the author should be familiar with certain working techniques. Scientific research involves not only an individual activity, based on the information and data collection or the formulation of some innovative theses. It also involves communicating the results to a differentiated audience. One should find a purpose for the data collected: it should be taken over by their recipients in an accessible form. In other words, there must be a balance between the content of a research on the one hand, and the shape of the wording on the other. Being familiar with the steps to make in a research endeavour, and observing the rules developed to complete the research in the form of a scientific paper, are both secret ingredients of a successful endeavour.

What should we understand by the concept "scientific paper"? Umberto Eco sets out the prerequisites for a work to be considered a scientific one or not. The requirements to be met by a scientific work are as follows:

- To raise a red flag on an subject recognizable by others;
- To say about the subject under scrutiny things that have not been said before or to reinterpret what has already been discovered;
- To prove useful to others;
- To put into circulation the elements needed to check the formulated working assumptions.

The concept of scientific research is worthwhile too.
Scientific research involves "carefully examining facts, phenomena or processes, observing their characteristic features, the relationship between the explanation of the causes that led to the occurrence of phenomena or processes, the discovery of new facts, phenomena, and laws, unknown yet, sketching the development lines of studied phenomena or the mechanism of functioning of the studied structures".
Thus, the first requirement of the scientific activity is the documentation work, getting familiar with the results of the previous researches devoted to the subject in question, knowing the state of play of contemporary research addressing the same theme.
A researcher must be endowed with a series of skills that allow him to achieve his intended purpose. He must prove a great curiosity, hard work, tenacity in the pursuit of the goal, imagination, the capacity to overcome possible setbacks, a great love for science, and sufficient modesty (a great ability to reason, to get him/herself away from preconceived ideas, a dose of imagination yet under the censorship of reason).
Scientific research involves, besides specialized knowledge, the mastery of appropriate working techniques. Knowing and applying these techniques are necessary for the researcher for several reasons, because they:

- ensure and effective and efficient conduct of the research work itself;
- allow the presentation of the results obtained in an easily accessible form for the specialists;
- provide to a text what we used to call an *academic tenure*, the formal but important aspect if we look at it from the point of view of the recipient: the scientific writing.

2. Types of scientific papers

To be considered a scientific paper, a text must meet two fundamental prerequisites, namely: to bring something new and/ or to be useful. Between these extremely general boundaries, the scientific works take a wide variety of shapes, using a combination of several classification criteria.
Based on the type of material on which they rely, there are primary and secondary research works.
Primary research work is based on a factual material collected or extracted by the author. It can only report a new discovery (for example, a writer's new manuscript), it can review and classify a whole set of data (for example, establishing a new type of subordinate), or it can bring a new interpretation of some data already known, for example, etymological disputes).
Also in the category of primary research works one can include the critical editions of various texts.

Secondary research work is substantiated by published papers, which are recorded and presented in various degrees of detail, including bibliographies, reviews, and essays.
According to the goal pursued by the author, subject to the target public, scientific paper works may have a teaching purpose or pursue popularizing scientific knowledge.
Depending on the fundamental approaching method, one may distinguishes the analytical method from the synthetic method. The former is limited to researching a phenomenon, a particular aspect, while the latter focuses on the assembly, on the whole system. The two essential methods are not mutually exclusive: the synthesis *relies* on the results of the analysis, and the analysis is more relevant in relation to the assembly.
Size of the text is rather a more practical classification criterion than a scientific one. It influences the structure of the paper work only to a certain point. The practical use has established certain correlations between the type name of a scientific text, and its extension, respectively. Under no circumstances, the length of a scientific contribution determines its intrinsic value.
The modality of conveying the research paper influences the structure of the text only in the case of written - oral communication conflict. The way of publishing the text influences the technique of further quoting the text.
As mentioned above, secondary research records, presents or comments on scientific papers that already exist. In order to identify these works, the author must provide a bibliographic description for the works in question.
The *bibliographic description* represents a minimum of mandatory data relating to a paper / document, some additional information, all set in a strictly regulated order. The description serves as the basis for the library catalogues and indexes, being included the category of secondary documents. The bibliographic description is at the same time a way of analytical and synthetic processing of documents, being the "identity document" of a scientific paper. It is always placed after the book's inside cover, softcover or home page. The next examples present the standard order of information.
Examples:
Books (or other separate publications)
1. Author's last name 2. Author's first name (reproduced in the form provided by the publication in question); *3. Book's title and subtitle* (it is written in the language of the book, the name of the publisher, the name of translator, as well as any other element which identifies the publication should be mentioned); *4. Edition number* (in Arabic numerals); *5.Volume number* (in the case of a multi-volume publication) or the part of the volume (in Arabic or Roman numerals, as it may be the case in the publication); *6. Series and collection*; *7. Publishing house*; *8. Place of publication*; *9. Year of publication*; *10. Number of pages* (or the indication of the chart, map, illustration, CD).

3. Articles in periodicals

1. Author's last name; *2. Author's first name* (the same rules apply as for books); *3. Title and subtitle of the article*; *4. Periodical's title*; *5. Place of publication* (to distinguish between homonymous titles); *6. Year of publication* or *volume's number*

in Arabic numerals; *7. Serial number* of the periodical number; *8. Number's date; 9. Page quoted*.
If one talk about collective papers (dictionaries, treaties, etc.) or study collections, the bibliographic description differs: the author's role is taken over by the institution and the authors are mentioned only if their names appear on the inside cover after the work title.
The secondary research includes the *bibliographic note*. This is a brief presentation of a book or a collection of scientific papers without comments or appraisals. It consists of the bibliographic description and a succinct summary of the book (there are mentioned only headings of the chapters, if they are sufficient for presenting the content). In such a bibliographic reference, the name of the reviewer is noted at the end of the text.

Umberto Eco believes that the notes should be used to:

- indicate sources of quotes;
- add other bibliographic references to support a subject discussed in the text;
- make external and internal references;
- insert a quotation to reinforce a point of view expressed in the text;
- make clear the statements in the text;
- correct some of the statements in the text,
- pay debts.

Eco states that a correct quotation in the bibliographic notes must:

- ensure the distinction between books and chapters, and between the chapters of the same book;
- unequivocally identify the author's name and book's title;
- identify the publishing place, the publisher, and the edition,
- identify the size of the book.
- records for the documents posted on the Internet

We should make use of the first two blocks of information in the case of books. The most important differences are in the case of the third block. In the case of text data, it is useful to note, besides the title, other useful information such as: the website on which the text is posted, the nature of the text. Some documents posted on the Internet are genuine electronic books, others are like traditional articles, while others are simple notes. The borders between different types of documents published on the Internet are labile; therefore, these data should be recorded as an annotation not subject to formal constraints
If the Internet address has an error or has changed we also consider the usefulness of this data in the case of a search. When publishing facts, we keep the Internet address. We record, if we find, the date when the document was published on the Internet. In this case it could be a time span. Documents on the Internet are often rewritten on the go, therefore they have a dynamic nature. The old concept of "pas for press" does not apply here but very rarely. We should consider the date when we saw the document on the Internet. The recommendations made for books, studies and documents posted on the Internet are far from covering all possible cases. However, one may say that they fit into most of the sources of a paper work.
The *review* is the following secondary research. The critical and actual nature is the characteristic of the review. It consists of the bibliographic description, content summary and critical appraisals. The name of the reviewer is mentioned at the end.

The *essay* relies on bibliographic information and its structure is an exercise for an independent scientific research The value of an essay is measured by the pertinence of the new opinions, the richness and the degree of systematization of the information it presents. The critical appraisal of the opinions previously presented and putting forward some new original solutions concerning the subject in question are welcome.

As regards the technique of elaborating a scientific paper, the scientific research means the analysis of some facts, phenomena or processes, the observation of the specific peculiarities thereof, the determination of the existing relations between them, the explanation of the causes for the occurrence of the phenomena in question, the elaboration of new laws, and the presentation of the development trends of the phenomena in question. The modalities and methods of scientific research vary depending on the field of research. Stages of scientific research are common to both the natural sciences and the humanities.

The first stage of scientific work is *documentation*. It is extremely important to be familiar with the results of previous research works in a certain field and the state of play of the current research work on the issue. Without making use of existing and verified data, the researcher can draw conclusions which could be identical to the opinions and results of another author's research. More seriously, the author may make serious mistakes in terms of interpretation or understanding of the issues addressed, which may lead to the misguided orientation of his/her entire research work and to jeopardising his/her reputation and statute of scientific researcher. The credibility of such a researcher is broken after making such errors.

The documentation activity is facilitated nowadays by the existence of bibliographies, - general or specific, current or retrospective, primary or secondary, descriptive or annotated, as well as of bibliographic indexes. It is recommended that the selection of the literature be done in a certain sequence: first one should make use of the bibliographies accompanying the journal articles or books, then it is recommended to study the encyclopaedias, then to pass to the bibliographic catalogues, and finally to consult the bibliographic indexes.

The way a researcher follows the literature for documentation is of great importance for the way in which his own research work is carried out. The scientific content of the material needs to be studied with great care, "with the pencil in hand", in order to write down some data and ideas as the researcher passes through the text. The reading must be reflexive in order to follow the reasoning of the author and to discovery any questionable or wrong parts in the original text in order to prevent them from occurring in the new scientific paper.

The next stage of the documentation is the researcher's *own research*, which consists in gathering factual raw material, a thorough analysis thereof, organizing it and providing the interpretation of the facts under review. Gathering the raw material for research requires hard work, time, sense of observation, while the interpretation thereof requires a sound reasoning, the detachment of certain preconceived ideas, and an imagination censored by reasoning. The researcher must have these qualities in order to achieve his/her goals. S/he must have great curiosity, a great capacity for hard work, tenacity in order to achieve his/her goal, initiative and imagination.

Once the theme of the work was set, the researcher must launch him/herself in this quest for knowledge by starting with reading the dedicated literature. He needs an index of the studies, articles and materials s/he will consider, assuming a thorough

knowledge of the sources in which s/he will find everything written in the field in question.
A first source of documentation is the public library book fund. Library catalogues guide readers though the documentation material available in a particular library.
There are several classification criteria for the library catalogues, but we are only interested in the classification following the grouping of references. According to this, there are *alphabetical, systematic and topic or subject library catalogues*.
In the *alphabetical catalogues*, the references to the publications are grouped by the name of the author or institution in which the work was written, in strictly alphabetical order, in the case of collective works or reference works (bibliographies, encyclopaedias, dictionaries), the bibliographic records are ordered after the first letter of the first initial of the paper title. The records showing the works of the same author are placed either in chronological order (by year of publication) or in the alphabetical order of the titles.
To ensure the selection of the literature items by its content, there are *systematic and topics catalogues*: in the systematic catalogue, the references of the printed publications are grouped on the fields of science to which their content is bound. Within the respective branch, the references are grouped first on classes, then in each class on subclasses, in the subject catalogue, the sciences and disciplines are grouped in accordance with the international decimal classification in ten classes, each class having ten subdivisions and so on. In the subjects catalogue the researcher will find all publications dedicated to the topic in question grouped together.
The bibliographies are the second most important source of information. Bibliographies are those works that contain repertoires of studies, articles, books, magazines, collections, documents, manuscripts of interest for a particular branch of science or culture, belonging to a certain age, or representing the work of a particular author. They can be classified according to their themes in: *general bibliographies* (which include works from all fields of knowledge), *special* or *personal bibliographies* (which record all the writings of a person, as well as the studies or articles that have been written about the author and its works). Bibliographies can be independent papers (books or brochures), periodicals for current bibliographic information (newsletters, reference journals or reviews), bibliographic lists attached to magazine issues (the last issue in one year, stating the articles or studies published in the pages of the journal in the respective calendar year), and bibliographies accompanying the specialized works.
Starting with 1928, the publishers of psychology journals in the United States of America put forward a standard method for preparing manuscripts, and then published a manual with precise rules for the presentation of scientific studies: *Publication Manual of the American Psychological Association*. Based on the aforementioned manual, Marc A. Provost, Michel Alain, Yvan Leroux, and Yvan Lussier from the University of Quebec set out a *Guide de presentation d'un raport de recherche* (1993/1997).
In the introduction of the aforementioned guide it is stated that official rules must be adapted to respect the particularities of the language. Thus, it is almost unanimously accepted that the organization of the material for publication should follow a *standard pattern*: an introduction which presents the current stage of knowledge of the subject in question, the review of the literature dedicated to the subject aforementioned, description of the research design and implementation, including all useful

information to check the consistency of the results through a new research, the presentation of the data and the methods that led to conducting the research, a discussion on the relevant research data, and the theoretical interpretation of the results. The abstract, although written last, it precedes the study itself in the scientific articles however in the PhD or BA works, it is not advisable to submit an abstract. The abstract is a short text about the content of the scientific article or the research report. Like the title, the abstract provides information on the research and serves to index the scientific paper as well as to archive data. A good abstract must be accurate, written with attentively, accurately and to reflect the content of the study, and must not include information which is not found in the text. Although concise, the abstract should be comprehensive enough, containing the necessary terms for indexing, the theses, results, conclusions and implications of the study. Is should be written clearly, using verbs in active diathesis and at the present tense, the abstract must be coherent and legible.

Publication Manual (1994, 9) sets the length of an abstract for a study at 960 typographic symbols, that is about 120 words. For the summary of an empirical research report, there are recommended 100-120 words, and for a theoretical article 75-100 words. For the PhD theses, a more comprehensive summary of approximately two pages i.e. about 500 words is recommended, covering the following: the study's subject, the objectives or working assumptions, the methodology, the results, and the main conclusions of the study (Provost, 1993 / 1997, 40).

The drafting style of a research project addresses the following aspects: the organization by chapters, the handling of bibliography, and the editing form. The subject of a research project can be presented in one or more chapters. These, in turn, are organized on paragraphs. However, the number of paragraphs should not be exaggerated, and the division of the paper into paragraphs and sub-paragraphs should not be well organized. The introductory chapter and the final chapter should be a synthesis of the paper work. In the bibliography, the sources of reference must be either written in the alphabetical order of the authors' names or in a different order, recommended by the scientific co-ordinator or according to the literature guidelines. The works included in the bibliography must be quoted at least once in the research project paper. If the author of a scientific text wishes to draw attention to a term or phrase in a quoted text, s/he can highlight the term, expression of phrase in italic fonts and specify, in brackets, the "s.n." formula. If the quote is extracted from a well-known literary work, the quoted word is written italic, but the comment "s.n." is not added anymore, since the commentator's intervention is obvious.

The word processing typing should use the font Times New Roman 12 or Bookman Old Style 11, at 1.5 spacing, and observing the page setup margins setting of 2.5 cm top and bottom, and 2.5 cm left and right. Generally, documents are written using a single font, from the beginning to the end. This is a traditionally established academic practice. Different fonts are used for contrastive purposes. However, this tradition has neither a rational basis nor an aesthetic one. This tradition is the direct result of some technical inconveniences that would have been required some cumbersome and complicated operations when using the inventory of the moulds in the printing houses. Now, thanks to performance in the field of computers and word processing, this tradition of is being "violated" more and more often.

The trend to abandon this taboo is international. Whenever we use graphic contrasts, a general principle should be taken into consideration: in order to highlight a word or

phrase in a text, this word/phrase will be distinguished graphically by a single element from the rest of the text, namely its writing in ITALIC or BOLD. A 1.5 cm header can be used to show like a technical documentation (title of the chapter), and a footer that will enclose at least the pagination in Arabic letters. The paper work, as a whole, will include the cover page, the home page, the contents, the index of notes and abbreviations, the actual content with the chapters that follow in the pre-established order.
Chapters and subchapters shall be highlighted with fonts in bold. This aspect regarding the writing of a paper work does not require the restrictive enforcement of some drafting norms, but provides, as a guideline and support. Each text editor can choose, within certain limits, the style of writing, font type and font size. The choice generally takes into account the nature of the published document, the destination thereof, the observance of certain printing traditions, the author's personal desire, the editorial exigencies, and the aesthetic taste of the author.

4. Plagiarism

Quoting accurately, therefore making use of using footnotes protects us from plagiarism. Plagiarism means to steal somebody else' ideas, texts (fully or partially), other people' works, without quoting them". Plagiarism is a "problem of professional ethics.
"Traditional" plagiarism has expanded with the emergence of the "on line" plagiarism (or the digital or Internet based plagiarism). To avoid it, we will comply with the electronic citing rules. There is also a "decent" form of plagiarism, which is involuntary plagiarism. Obviously, one should avoid the latter too. This type of plagiarism is "practiced" by those who do not mention who are the real owners of the written ideas, treating the latter as "common good". Septimiu Chelcea recommends some rules for avoiding involuntary plagiarism, valid for both typing and electronic quoting:

- Using brackets for any quote that belongs to others;
- Mentioning the name, the title of the paper work, the place of publication, the publishing house, the year, the page;
- Paying attention to the distinction between the common knowledge that has entered into the patrimony of science and information falling under the scope of intellectual property law;
- Using our words to reproduce the core ideas of a text, mentioning accurately the author and the work that inspired us;
- Abbreviating the original text, expressing in our own way the basic ideas of the cited work;
- Learning to take "intelligent notes", not by copying sentences and phrases from our professors' lectures;
- Getting used to working with reading sheets and records to synthesize the ideas of the authors, not just to reproduce them in brackets.

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