

Writing a research paper

Abstract

The value of research and the career of a university lecturer depend heavily on the success in publishing scientific papers. This article reviews the guidelines for writing and submitting research papers. The three most important success criteria in publishing are as follows: the paper describes a good research, it is written according to the traditions of scientific writing and submitted to the right journal. The “right” journal publishes papers similar to yours. It is effectual to follow the usual structure of scientific papers: introduction, methods, results, discussion, and conclusion. Introduction gives the review of the literature studying your problem and leads to the aim and the hypothesis of your research. The methods part contains the description of the research in detail, which enables the reader to do the research over again. Results are usually given in tables and graphs. Discussion includes the analyses of the data received to find support or reject the hypothesis raised in introduction. The inferences are compared with the findings of other researchers and shortcomings and/or tasks for further research are pointed out. It is important to avoid plagiarism in the manuscript and to consider the copyright law. The manuscript is sent to the editor of the selected journal together with a letter explaining why the journal was chosen and who is the contributing author. In about three months, the editor sends the reviews of the manuscript to the contributing author. The reviews are free support and advice in doing research and writing papers. If not rejected, the manuscript will be revised by the authors and published. Even the published papers contain shortcomings, which do not harm their contribution to science. The article has one table and the list of references in ten entries.

Introduction

Teaching in the universities has to be science-based. Therefore lecturers and professors are evaluated according to their success in publishing scientific papers. There is a proverb “publish or perish” in universities and colleges.

The aim of this article is to deliver some essential ideas for writing to scientific journals. The problems of selecting the journal, writing the paper, and submitting it to a journal are discussed. A good research is a basis for successful publishing but the research methodology is not treated in the article.

There are different types of papers:

- a) the reports of empirical studies,
- b) the description and analysis of a case study,
- c) the review articles, which include meta-analysis of previous research,
- d) the theoretical articles to develop theory, and
- e) the methodological articles to develop research methods (Publication manual ... 2003).

The two first types of papers are considered first of all although the ideas below are applicable to the other types of papers as well.

It is difficult for a young researcher to write and submit his/her paper. S/he is thinking that the research or the manuscript is not good enough for publishing. Perfect papers are never published because there are no perfect paper. Good papers are published. These papers put the scientific discussion in the field forward (Day 2006).

You should not be afraid of rejection. Reviewing of your manuscript gives you invaluable information about the research in your field and about writing research papers. Publishing in valued journals and collections is an inevitable part of your career as a university lecturer.

Let us look at some success criteria in publishing.

1. The paper describes a good research. The research uses current ideas and methods appropriately. It is grounded in theory and adds something to it. Good research is rigorous, systematic and very focused (Day 2006). You should discuss one problem in one paper, although there can be different approaches to the problem in your paper. Large samples of subjects facilitate the acceptance of your manuscript.
2. You answer the question why your paper is important. The importance can be in wider principles, which emerged from your research. You can describe how people can use the findings of your research and how other researchers can develop the work further. Papers on popular topics (gender, collectivism, narcotics, etc.) are easier to publish (Toomela 2003). A good paper arouses the interest of readers.
3. You have been reading the best papers in your research field and you give an overview of the contemporary trends in the field. Your paper will be published if it adds something to the international discussion in the field. You can contribute to the discussion if you know the current state of affairs.
4. The paper is written according to the traditions of scientific writing. Scientists are accustomed to read the papers with traditional elements, structure and style. If you violate these traditions, then your paper is difficult to understand and editors are eager to reject such manuscripts. The most thorough presentation of these traditions is published by the American Psychological Association (Publication manual ... 2003).

Below we will discuss the writing and submitting of manuscripts. However, we begin with selecting the appropriate journal.

Selecting the journal

Most papers are rejected because they have been sent to the wrong journal. Papers are not badly written and/or the described research is not of low quality but the papers do not suit the objectives of the journal. We need to orient ourselves to the needs of the readers and to the journal policies (Samuels S. J. 1991).

The aims of a journal can be found on its web page or editorials published in the first or last issue in a volume. Journals' web sites usually give the following information:

- a) editors, indexing in databases, forthcoming thematic issues,
- b) aims and the content of the journal,
- c) recommended style of writing,
- d) copyright issues of the papers,

- e) appropriate length of papers,
- f) requirements to headings, figures, references, etc.,
- g) guidelines for submission.

You should decide if your manuscript fits the aims and the content of the journal. In this case you have a good chance to be published.

Indexing of the papers of a journal in scientific databases is an indicator of the quality of the journal. The other indicators are high frequency of citing of the papers in other journals, well known editors and editorial board members, low acceptance rate, etc. (Klingner, Scanlon, and Pressley 2005). Publications in highly valued journals have more weight in your CV but it is more difficult and time-consuming to get published in these journals.

Scientific databases themselves are of various prestige in the scholarly world. The most prestigious is the ISI (Institute for Scientific Information) Web of Knowledge (Current Content). It includes the most valued scientific journals in the world. Every branch of science has its own database, for example the SSCI (Social Science Citation Index) in social sciences, the ERIC (Educational Resource Information Center), the International ERIC and the BEI (British Education Index) in education, PsycARTICLES and PsycINFO in psychology etc. The common searching engines are not the usual tools for finding scientific papers.

The acceptance rate of a journal is the proportion of the number of submitted manuscripts to the number of published manuscripts. The acceptance rate of journals is very different; it varies from one percent to eighty percents (Henson 1999). High quality journals have lower acceptance rate as rule, but some top-quality journals have high acceptance rate as well. Kenneth T. Henson (1999, 780) recommends young researches not to send their manuscripts to the journals with the acceptance rate below 25%. Her paper includes some data about the acceptance rate of journals on education.

Journals have thematic issues that are announced about a year before the composing of the issue. If the topic of the manuscript fits the content of a thematic issue, prefer the issue. The acceptance rate into the thematic issues is about three times higher than the acceptance rate into the general issues of the journal. After the thematic issue is published, the editors tend to reject the manuscripts on this topic (Henson 1999). The topics of the thematic issues can be found in the editorials of the journal and on the journal's web page.

Different journals value different components of quality and you should have this in mind while selecting the appropriate journal. Some journals value practical implications of the research, the others value the originality of findings and approach, the others emphasize high clarity and readability of presentation, still other editors base their decisions mainly on the rigor of the research methodology, etc (Day 2006). Send your manuscript to the journal which values the aspect well developed in your article!

You have read many papers while preparing your research and manuscript. The journals you have read most are usually the best to submit your manuscript. You know the scientific problems of the journal, the favored research methods and the style of presentation. You have used this knowledge in your paper and therefore it fits the journal. You probably have read some papers from one or two editorial board members. The members can be the blind reviewers of your manuscript.

It is easier to publish papers, which correspond to the world-view of the editor and reviewers (Toomela 2003). You can find something about this world-view if you

read the papers of the editors and editorial board members on your topic or related topics.

Really new knowledge is easier to publish in periphery; it can be published in the leading journals only if there are two competing scientific schools (Toomela 2003).

Most manuscripts are rejected by highly valued journals. Nevertheless, the papers are published in some other journal. You can have more than one journal in your mind as the possible places for the publication of your manuscript but you can send your manuscript only to one journal at once. If you are not sure in the selection of the journal, you can send the abstract of your paper to the editor and ask if this paper might be of interest for the journal (Klingner, Scanlon & Pressley 2005; Murray 2005, 63 - 64).

Writing the abstract and introduction

Robert Hauptman (2005, 115) writes: “Perhaps the single most important point is to have the desire to discover something new and share it with readership”. It is time to begin the writing of a paper when you have something to say to your colleagues in the scientific world (Klingner, Scanlon & Pressley 2005). You have an evidence-based new conclusion. The conclusion makes some contribution to theory and it can be applied to develop practice. The new idea can be developed on data, which you have used earlier in another paper to base the conclusion in another area.

Usually the question is to be answered are you the single author of the paper or somebody is your co-author. It is always easier to write in co-operation, the quality of the paper will be higher and you learn something from your co-authors (Hauptman 2005; Murray 2005). It is useful to work in-groups and speak about the idea of a paper to colleagues and if they add something essential to the framework of the paper, they have the right to be the co-authors. All the persons who have added creatively to the research or writing are the authors.

Further we will treat the traditions of scientific writing according to the usual structure of a research paper. The structure is as follows:

- a) abstract,
- b) introduction,
- c) methods,
- d) results,
- e) discussion,
- f) conclusion,
- g) references,
- h) appendixes.

The structure has been developed for the papers describing empirical studies but it is used for other types of papers with some modifications as well. In the papers about case studies, the discussion and the results parts may be joined. If the conclusion is short, then it can be given at the end of the discussion without a special heading, etc.

It is useful to start the writing from an outline of the paper (Lester 1990; Neman 1989). The outline organizes any support you can give to your main new idea. The subheadings in your outline should describe their content as fully as possible – then the outline is of real help in writing. I have put concrete ideas into my outlines and references to literature to rely on during writing. In my outline, it is also given how many pages or characters can be devoted to every subheading in the paper.

Composing a good outline constitutes about 20% of the total writing time. It prevents many rewritings, additions or deletions after writing.

The title of paper should clearly describe its main idea. Besides this, ask yourself which words you will use in looking for this kind of information in databases and look if the words are in your title. If not, consider rewriting of the title or include the important words into keywords. A theoretical concept may be more interesting in the title than empirical bases. A good title is up to 12 words. Waste words (study on, a, the,...) should be excluded and verbs are not used. The title does not contain abbreviations (Tirri 2002).

The abstract reflects the main content of the paper. It usually includes the following information:

- a) purpose of the paper,
- b) methodology of the research: subjects, instruments, procedure,
- c) findings and conclusion,
- d) the value of the paper.

The journal editors give the length of the abstract for their journal. Usually it is up to 100 – 250 words. In spite of the small volume, the abstract must be understandable without the paper. The research is described in the past tense.

Introduction is one of the most difficult parts to write. It has several tasks: to develop the background of research, indicate the importance of the problem, and formulate the aim, hypothesis, and rationale of the research.

A weak review of the literature indicates that the author is not competent enough in the area and this may be one of the reasons for the rejection of the manuscript. A good review of the literature demonstrates the logical continuity between previous and present work. It discusses only this literature which is related to the problem. You cannot review all the papers available and give an exhaustive historical review. It is useful to begin from a recent meta-analysis if available, to consider the latest publications in the area and especially in the journal to which you intend to submit your paper. The editors and authors of the journal can be the reviewers of the manuscript (Fradkov 2003). The review should be understandable to a relatively wide audience. Nonessential details, statements, and concepts intelligible only to the specialists might be avoided. A simple statement of controversy is better than an extensive and inconclusive discussion. A good review describes the problem and the solutions proposed by other researchers. It emphasizes the pertinent findings and possibly relevant methodological issues (Publication manual ... 2003).

It is very important to formulate the aim of the paper. The aim points to the final conclusion of the paper. The aim and the conclusion are the center of the manuscript where to concentrate all the material. The review of the literature depends on the aim; the research methods depend on the aim, and the discussion. Without a clear aim there can be much information in the paper but it is not understandable why all this material is given. At the same time, the word “aim” is sometimes omitted. For example, “The paper examines...”. The aim can be divided into more concrete research questions. After the aim, restrictions of the research can be described.

Quantitative research is based on the theory about the phenomena investigated. The theory is described in the review of the literature and an untested inference or an unsolved problem is defined. The theory enables the author to ground a hypothesis to solve the problem. Together with the hypothesis, the explanation should be given why this hypothesis is raised.

At the end of the introduction, there is sometimes a short description of the rationale of the investigation described in the paper (Publication manual... 2003, 17).

The rationale gives an overview of the logic and the data used to ground the final conclusion. In the rationale, the variables manipulated are mentioned, the research methods, different parts of the research if available etc. are referred to. The general scheme of the paper prepares the reader for a better understanding of the details in its following parts.

Writing the methods and the results section

The next important part of a scientific paper is the methods part. It usually has subheadings: subjects, instruments, and procedure. The method must be written in detail so that the reader can replicate the research because the replicability of research is the cornerstone of the scientific method. Unusual methods may require a literature citation. If the paper describes a continuation of an earlier study and the method has been soon published in detail, you may refer the reader to your earlier paper and give a brief summary of the method (Publication Manual ... 2003, 17). Statistical methods can be named in the results part. Too many details burden the reader with irrelevant information; therefore you should be parsimonious with details and words. On the other side, too brief and vague methods description may cause the rejection of the manuscript (Klingner, Scanlon & Pressley 2005, 16).

In the first subsection of methods, the subjects are described. Usually the numbers of subjects, their age, educational level, ethnicity, division by gender, socio-economic status, etc. are given. It is very important to give the information about the representativity of subjects. As far as the strict methods for ensuring representativity are usually not used in educational research, some comparison of the subjects in the research with the entire population is of big value. For example, “the subjects were from the top third ability group in the Republic of Lithuania” or “an average rural school”. The school names or the students’ names are usually not given; pseudonyms can be used if necessary.

The second subsection of methods is instruments used in research. Describe in detail the basis and the composition of your own questionnaire or test (including the number and the type of questions). Give examples of questions! Sometimes the whole questionnaire is in the appendix or the results part. If you were using the instruments elaborated by other researches, give the exact names and references of these tests and questionnaires! The method for verifying the correctness of the translation of the instrument should be mentioned. It is very important to give the data about the reliability and the validity of your instruments.

The third subsection of methods is procedure. You should explain why you used this procedure and then represent it. Describe the rules followed in the data gathering process: instructions given to students, time for filling in the questionnaire, randomization procedure, the language used, etc.! Describe the coding of the subjects’ answers if unusual or the method for the analysis of the textbook. Sometimes the researcher could not exactly follow the procedure fixed in the research plan. The deviations from the planned procedure can be referred to in this subsection of the paper.

After the methods part, the results of the research are given. In qualitative research the results are the subject’s expressions, data in documents, individual scores in questionnaires or tests, reports of observations, etc. The results of quantitative research are usually given in tables and graphs. These are the average data for groups of subjects, not individual scores. Only these data are presented which are needed for

grounding the final thesis. Tables and graphs are not retold in the text but their main content can be formulated in the results part. A short introduction of the sources and the importance of the tables are added. The tables and graphs are usually given on separate sheets at the end of the manuscript. In the text there is an instruction: "Insert Table 1 here!"

The methods of statistical analysis of the data essentially belong to the methods part however the statistical methods are usually given in the results part. The methods are named and then the results of the analysis are given. Unusual methods need reference to the source where the method is introduced and/or need explanation of the method. To give the reader a better understanding of the research, some data are added even if they are not used in the discussion part. Arithmetical means are given with the sample size and standard deviations. Variable means, reliabilities, and significance levels are added to correlation coefficients. Mean effects and differences are supplied with statistical significance (p value) (Publication manual ... 2003, 21 - 22).

Writing the discussion and the reference list

Discussion is the most important part to write. It explains how the results approve or disapprove your hypothesis (the disapproved hypothesis must have solid bases in the introduction part of your paper). The generalizations should be explained and compared with the findings of other researchers. The conclusions contradicting the mainstream thinking in your area must be very well grounded or omitted.

The structure of the discussion must be in accordance with research questions, hypothesis and results. You have to discuss and not to retell the results. You are not allowed to introduce new data in the discussion part (Klingner, Scanlon & Pressley 2005).

In the discussion part, you are to evaluate and interpret the implications of your results. The shortcomings of the method can be given here as well; sometimes they are at the beginning of the discussion. Many discussion sections are too long and verbose (Tirri 2002). If the discussion is short, then you can join it with the results or the conclusion part.

In the conclusion section you give the main results of your research and the main answer to your research question. This is your contribution to the development of science. It is soon the fourth time you write down your main idea: the first time it was named in the heading, the second time formulated in the abstract, the third time thoroughly explained in the discussion, and the forth time repeated in the conclusion. Implications based on your findings are also very important here and new research questions can be named. But no new ideas are introduced in the conclusion part. Sometimes a mistake in the concluding parts is that a general inference is made although the subjects in the research were not representative to the whole sample.

The most important rule in composing the list of references is that all the sources you have referred to in you text must be included in the reference list and the list should contain only these references which are mentioned in the text. You should follow the journal's rules for forming the references, which in many cases are the same as in the Publication manual of the APA (2003). If you are using an Internet source, then the address of the source and the date of retrieval must be given in the reference list besides the journal name, volume, etc. (Publication manual ... 2003, 231). All the parts of every reference should be checked in the original publication.

Secondary references should be avoided. The reference list is an important source of information not only for readers but for reviewers as well. It is important to include significant publications of recent years preferably from published journals in it. Look carefully for publications in the journal to which you intend to submit your paper (Tirri 2002)! A poor reference list is a good justification for the rejection of a manuscript (Fradkov 2003, 1647).

Some papers have appendixes. The appendix may include: a list of stimulus materials, or an unpublished test and its validation, a new computer program, a complicated mathematical proof, or a complex piece of experiment, etc. (Publication manual ... 2003).

Academic style

To get people to read your paper, it must be interesting in content and style. The content is to some extent new to the readers and the style should be engaging and even exciting. The effect can be reached by indicating on controversies, giving unexpected results, simple writing etc. (Mikk 2000, 243 – 268). The text in the active voice and the first person is more interesting than the text in the passive voice. At the same time, the passive voice suggests objectivity of the material. The scientist must be objective and examine all the arguments pro and contra of his/her thesis. Expressions of surprise, exclamations, apologies, etc should be kept to the minimum in the text (Põldsaar & Türk 1999).

A scientific text is usually difficult to read. It contains a new knowledge and many scientific terms. In spite of that you should try to explain your idea as simply as possible. Editors are not willing to publish papers, which are understandable only to some colleagues of the author. Comprehensible writing is important to the reviewers as well (Samuels 1991).

There are many rules for clear writing (Mikk 2000, 157 – 198). Some of them follow.

1. Avoid long and complicated sentences! Every sentence is to be taken into working memory before it can be understood but the capacity of the memory is restricted. You can look at the words in your text and ask if they are really needed there. Klingner, Scanlon and Pressley (2005) recommend avoiding the passive voice.
2. Prefer simple words! Restrict the usage of complicated terminology! Do not put symbols and descriptors you have developed for yourself into your paper! Words are in the text not to impress readers but to express your concept (Day 2006).
3. Make your text as concrete as possible! Abstract concepts are difficult to understand. Give examples! There can be examples of the questions from your questionnaire, the examples of subjects' answers, the examples of interpretation of the phenomena studied, etc.
4. Follow the usual structure of a research paper! Relate all the parts of your paper to each other and to your final conclusion! Present your problem and base a solution!

The recommendations for understandable writing should be used to the extent needed by the readership of the journal.

One more aspect in writing is important – your language should not hurt anybody. Usually the papers referred to in the introduction part are not criticized. If

needed, the controversies and unsolved problems are pointed out. You should avoid sexist words: (mankind, he, chairmen, etc.), racist words (Negro, wog, etc.), ageist words (crone, geezer, etc.), and homophobic words (queer etc.) (Pöldsaa & Türk 1999). Nowadays “he” is replaced by “he/she” or “s/he” if the gender is not important; “chairman” is replaced by chairperson” etc. Discriminative words also decrease the objectivity of the message. They may hurt readers independently of the author’s neutral intentions.

The last aspect in the academic style we consider is plagiarism. Pöldsaa and Türk (1999) differentiate two types of plagiarism:

- 1) taking someone’s text, table, or picture without indicating the source,
- 2) “documenting the source but paraphrasing its language too closely, that is, lifting whole phrases from the original or using the original’s sentence structure” (Pöldsaa & Türk, 1999, 22).

If you lift the whole phrase, quotation marks are needed and the page number of the original text should be indicated. There is however a practical problem. When I make notes from a book or a paper, I may use the phrases from the text because they are so good. If I now put the phrases into my own paper without using the quotation marks, I will violate the rights of the original paper’s author. The only solution is to put all the phrases in my notes, which I have taken from another person’s text into the quotation marks. Nowadays xerocopying is replacing note taking.

Quotations are not recommended to describe your thesis. The thesis should be presented in your own words. Quotations can be used to support your position (Neman 1989, 382).

Before submitting the paper

It is useful to give the manuscript to colleagues for reading and to carry out the last check before submitting it.

Colleagues will see your paper as readers or reviewers and their questions or critical remarks are useful to be considered before submitting. If you have no colleague in the area at your faculty, you can send the manuscript to an honored scholar. The scholars usually are ready to help young researches (Klingner, Scanlon & Pressley 2005). Ask the colleague to assess your paper in several aspects (Day 2006; Tirri 2002):

- Is the title appropriate?
- Does the abstract summarize the content of the paper?
- Is the aim of the paper clearly stated on the first page?
- Is the text logically flowing from point to point with subheadings, introductions and conclusions to sections?
- Are the method, results and discussion convincing in grounding the conclusion?
- Are the implications clearly specified?
- Is the text written in reasonably short sentences, without too many scientific terms or jargon?

Most of the scientific work is published in English but the native language of European or Asian researchers is not English. The journals require that your manuscript must be in perfect English, usually American. You can give your native language text for translation but this is not a perfect solution – the translator is not

familiar with your specific terminology and you do not learn English needed in the contacts with other researchers. It is better to write your paper in English by yourself. Of course, a good knowledge of English and an intense will is needed but the work pays back. The English spell-checker in the computer helps you to correct many spelling and some stylistic errors. It is very good, if you can have a writing coach who will help you in writing (Klingner, Scanlon & Pressley 2005). In every case, you should give your manuscript to a native English speaker to make the final language editing.

While writing, you have followed the instructions to authors found on the journal web page. Nevertheless, it is useful to carry out the last check before submitting the manuscript. The Publication manual (2003, 380 - 382) includes the answers to the following questions in the last check:

- "Is each paragraph longer than a sentence? ...
- Do all headings of the same level appear in the same format? ...
- Are any unnecessary abbreviations eliminated? ...
- Are the references cited both in the text and in the reference list? ...
- Are journal titles in the reference list spelled out fully? ...
- Is each figure labeled with the correct figure number and a short article title?"

If the journal is using blind reviewing, then you should remove all the information that might reveal your identity from the text (Klingner, Scanlon & Pressley 2005).

The usual composition of a manuscript for submitting is as follows (Tirri 2002):

- The first numbered page is for the title, the authors' names and addresses.
- The second page is for the abstract.
- Introduction starts on the third page and each succeeding section starts on a new page.
- Each of the tables and figures is on a separate sheet at the end of the manuscript.

The editors are interested in having the number of copies, which is needed for reviewing, and look at your paper if it is clearly printed and looks nice.

Submitting and resubmitting

You shall include a cover letter to the editor while sending the manuscript. It creates the first impression of you and your paper. The cover letter includes the journal name, the heading of the manuscript, and the authors' names. It briefly describes the contents of the manuscript and explains why you have chosen the specific journal. Write about similar publications written by the author. Refer to previous correspondence if there was any! Indicate the contributing author and give his/her surface mail address, telephone number, e-mail address, and fax number!

Editors are eager to know that the authors are the owners of the copyright to the manuscript. Copyright consists of moral rights (to make changes in text, etc.) and of property (to receive royalties) rights. All the rights belong to the author(s) at first. However, it can be written in conformity with the labor contract that the property rights on your paper, book, etc. belong to your university. While sending the manuscript, you should be ready to sign an agreement for the transfer of copyright. In the agreement the authors warrant that:

- the article is their original work,

- they have written permission to use any table, illustration, text that has been published earlier,
- the article has not been assigned or licensed by them to any third party.

According to the written agreement, the authors usually assign all the rights of copyright to the publisher, although they should leave the moral rights themselves. In some countries, the papers are published without signing the copyright agreement.

The researchers are willing to publish their research work in their native language and in English. This is not against the law if publishing in the native language fits one of the following cases:

- there was a license for publishing the paper only once,
- there was a license for publishing the paper during certain time,
- there was a license for publishing the paper only in the native language,
- there was no agreement for the transfer of copyright (Pisuke 2004).

You should inform the editor of the English journal about the publication in your native language in the first letter to him/her and indicate in the agreement that it was not earlier published in English. International journals usually ask the author to transfer the copyright and after that it is not possible to publish the same paper in the native language without including the right in the agreement with the international journal or fitting the agreement to one of the three first cases above.

The manuscripts can be submitted electronically or on paper double-spaced. Study the submission guidelines on the journal's web-site! Electronic submission is faster and usually it gives the possibility to follow the review process of your manuscript.

After the submission, you will receive an acknowledgement saying that your paper has been received. The editor will send your manuscript to (anonymous) reviewers. It can be sent to editorial board members or to the author you refer to in your reference list (Fradkov 2003, 1644). They will have one to six months for reviewing (Henson 1999). If you have not received the feedback in three months, you can write to the editor and ask about the progress of reviewing.

The reviewers are mostly engaged with the content of the research described not as much with the writing of the paper. The usual questions answered by the reviewers are as follows (Publication manual, 2003):

- Is the research question significant?
- Have the instruments satisfactory reliability?
- Does the research design fully test the hypothesis?
- Is the research advanced enough for publishing?

The reviewers may criticize some parts of your paper and give some suggestions. Be careful with understanding and using the ideas! "Do not believe everything an editor says. Do not disbelieve everything an editor says" (Hauptman 2005, 118).

The editor sends the blind reviews, their summary and a conclusion to the corresponding author. The reviews may be very different. The conclusion depends heavily on the significance of your problem and your contribution to its solution (Fradkov 2003). There are four possible conclusions (Table 1). We have to keep in mind that many published papers have been rejected somewhere before publishing (Klingner, Scanlon & Pressley 2005).

Table 1.

Possible conclusion of the editor
and the author's actions

Editor's decision	Comments	Author's actions
Accept as it is	Almost never happens after the first submission	Wait for proofs and sign the agreement for the transfer of copyright
Needs minor changes	Happens after the second or third submission	Make the recommended changes and resubmit
Revise and resubmit	Usual decision after the first submission	Make the acceptable changes and resubmit
Reject	Often the result of choosing a wrong journal	Make the important changes and submit to another journal

It really is a compliment to receive the editor's decision: "revise and resubmit". Respond to the editor at once and agree to rework your paper by the date given (Day 2006; Murray 2005).

Critical remarks in the reviews are a free advice and support to your research! Read them carefully and consider possible changes! Agree with the reviewer if your main thesis remains unchanged. The editor is waiting for changes you have made during the revision. Do not agree with the reviewer if your position is correct. You can explain the position using some more details.

Submit the revised paper and the letter of explanations, which describes the changes you have made and explains why some suggested changes were not acceptable (Klingner, Scanlon & Pressley 2005). The editor can send your paper to the same reviewers or new ones and you will receive new reviews together with the editor's conclusion, which usually is more favorable. If only minor changes were needed, the editor can accept your paper himself or herself.

The accepted paper!

The editor informs you about the acceptance of your paper immediately when s/he takes the decision. S/he also notifies the year and the number of the issue when your paper is published. Publishing can take from one month to two years (Henson 1999).

In some universities, the accepted paper is considered as valuable as a published one. There is no doubt that it will be published at the time noticed. However, the publication itself can take up to two years.

When the layout of your paper is made, you will be asked to read it and sign the text. You have to correct the spelling errors but you are not expected to disagree with the changes, which the editors have made. The only exception is the changes

that contradict your important ideas (Day 2006). It is not the time to add or rewrite anything.

Together with the signed proofs you will be asked to send the agreement for the transfer of copyright. The editor will send you a ready-made agreement and the author usually signs it without discussion. Some journals charge the authors money for printing tables, charts, etc. (Henson 1999). Usually the journals do not pay authors fee.

After the publication of the journal issue with your paper you will receive about ten copies of your paper to send them to your colleagues. Some journals send a pdf copy of published the paper instead of paper copies.

The description above gives an idealized picture of writing a research paper. Very many recommendations were given but it is practically impossible to follow all of them in one paper. You succeed in meeting some requirements to the paper and the others may be met not so good. Nevertheless, your paper may be published if it adds something to the international discussion in your area.

I have been analyzing the research methods in published papers together with my doctoral students in education and we have found shortcomings in them, sometimes serious. It does not mean that you should take the research or writing your paper without proper care. The higher the quality of your paper, the more rapid will be your success in science. It just means that it is impossible to write an ideal paper. There are excellent papers and published papers!

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