

Let's write this article!

Ways to improve cooperation between researchers and language editors in writing journal articles

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ABSTRACT

This study investigates how Finnish-speaking researchers at the University of Oulu cooperate with language editors in writing scientific articles in English. There is not enough awareness of the different aspects and benefits of this kind of cooperation, despite the fact that for researchers writing for scientific journals is an important part of their work. This thesis is a case study. There was no empirical research about the cooperation between researchers and language editors during the writing process of scientific articles before this study. In order to find out what the Finnish-speaking researchers at the University of Oulu think about their writing process and proofreading, they were asked to fill in an online questionnaire. The purpose of the questionnaire was to study how the researchers would like to cooperate with language editors at the beginning, middle and end of the writing process. After this, six researchers were asked for interviews. The interviewees were asked how they cooperate with language editors and what kind of feedback they find most useful for their writing. The answers were broken into themes for thematic analysis. More than a half of the informants reported in the questionnaire that they would benefit from more cooperation with a language editor. The interviewees estimated that cooperation would help to find ways to structure and present the content of their articles. This study revealed that there is a need to develop cooperation between the researchers and language editors at the University of Oulu. The cooperation should be based on the researchers' field of research, experience, aims and language skills.

Keywords: scientific writing, journal article, editing, cooperation, feedback

TIIVISTELMÄ

Tämän pro gradu -työn tarkoituksena on selvittää, miten Oulun yliopiston suomenkieliset tutkijat ja editoijat tekevät yhteistyötä tieteellisten artikkeleiden kirjoittamisessa englanniksi. Yhteistyön mahdollisuuksista ja hyödyistä ei ole riittävästi tietoa, vaikka tutkijoille artikkeleiden kirjoittaminen kansainvälisiin julkaisuihin on tärkeä osa työtä. Tämä tutkimus on tapaustutkimus. Ennen tätä tutkimusta tutkijoiden ja editoijien yhteistyötä tieteellisten artikkeleiden kirjoittamisessa ei ollut tutkittu empiirisesti. Tutkimus toteutettiin kahdessa vaiheessa. Verkkokyselyn avulla selvitettiin, miten tutkijat itse arvioivat kirjoitusprosessiaan ja sen kielentarkastusta. Tutkijoilta tiedusteltiin, miten he haluaisivat tehdä yhteistyötä editoijien kanssa kirjoitusprosessin alussa, keskivaiheessa ja lopussa. Tämän jälkeen kuusi tutkijaa kutsuttiin haastatteluihin. Haastatteluissa tutkijoilta kysyttiin, miten he tekevät yhteistyötä editoijien kanssa ja millaisesta palautteesta he arvioivat olevan eniten hyötyä kirjoittamiselleen. Vastaukset jaettiin teemoihin analyysia varten. Yli puolet kyselyyn vastanneista tutkijoista arvioi, että heille olisi hyötyä siitä, että he tekisivät enemmän yhteistyötä editoijien kanssa kirjoitusprosessin aikana. Tutkimuksessa haastatellut tutkijat arvioivat, että yhteistyö editoijan kanssa auttaisi löytämään keinoja artikkelin rakenteen muodostamiseen ja tutkimuksen sisällön esittämiseen. Tutkimuksen mukaan tutkijoiden ja editoijien välistä yhteistyötä tulee kehittää Oulun yliopistossa. Yhteistyön kehittämisessä pitää ottaa huomioon tutkijoiden tieteenalat, kokemukset, tavoitteet ja kielitaito.

Asiasanat: tieteellinen kirjoittaminen, tieteellinen julkaisu, editointi, yhteistyö, palautteenanto

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1 INTRODUCTION

Writing articles for international academic journals is highly competitive. For this reason being able to write well-composed scientific articles is a very important skill for every scientist. Researchers who can communicate well gain recognition for themselves and their institution. In scientific journals all aspects of an article – content, focus, structure, style – are studied before the decision to publish the article is made. This is why it is important to find ways to make writing scientific articles as efficient as possible.

In this thesis I will study how Finnish-speaking researchers at the University of Oulu deal with publishing in English and how they cooperate with language editors. This research is a case study. Before this research there was no empirical study on the cooperation between researchers and language editors in writing scientific articles. The subject had only been mentioned in some guidebooks of scientific writing. For this reason there was a need to study how researchers view the role of language editors in their writing process and how they cooperate with them.

The topic of this thesis is very topical because the editing services have been tendered out recently. This means that the writing process of the researchers has changed as they may not be able to use the same editors as before. Before the competitive tendering the researchers had been able to choose their own editors. After the Hansel procurement imperative came into action in 2014, they have had to use editors who work for particular companies. In this kind of situation it is very useful to examine the writing process and different ways of getting advice for writing in English. The situation also made it possible to compare the benefits of editing and proofreading, because the researchers had experiences of many kinds of editing and proofreading services.

The hypothesis of this thesis is that getting advice and feedback from language editors during the writing process can help in writing scientific articles, as opposed to proofreading at the end of the writing process. Academic writing is a dynamic, cyclical process (Murray, 2013b, p. 12). According to the hypothesis, a language editor can give useful advice for a researcher from the very beginning of the writing process. Proofreading, in turn, focuses on checking a completed manuscript. The hypothesis was based on the experience that the author of this thesis has of writing news articles and cooperating with colleagues and copy editors. In news writing there has to be relevant feedback on

the articles during the writing process. This makes it easier to write the articles from start to finish. In journalism the benefits of cooperation between writers and editors have been discussed mainly from the viewpoint of writing magazine articles (Töyry, Rätty & Kuisma, 2008).

The hypothesis was proven to be valid. The researchers interviewed in this study said that in their opinion, cooperating with a language editor during the writing process would improve the language, structure, focus and style of their text.

In order to find out how the Finnish-speaking researchers at the University of Oulu cooperate with language editors, the researchers were sent an online questionnaire in December 2016. The aim of the questionnaire was to find out what researchers think about their writing process. The questionnaire was answered by 94 researchers. After the answers to the questionnaire had been received, six researchers were asked to be interviewed about the topic. The aim of the interviews was to deepen the views presented in the answers to the questionnaire. The questions for the interviews were chosen so that they would give more information about the cooperation between the researcher and the language editor during the writing process. The interviews were made in February 2017 within two weeks. The researchers had been asked in the questionnaire whether they are willing to be interviewed about the same subject.

This thesis begins with a section about the material, i.e. the questionnaire and the interviews, and the method. Then there is a section about theory, which had to be compiled from different sources, because there was no previous research about this subject. After this is the analysis of the answers to the questionnaire and the interviews. At the end of this thesis are the conclusions about the ways in which writing scientific articles could be made more efficient and comprehensive.

2 SEEKING VIEWS ABOUT COOPERATION

In order to find out how the Finnish-speaking researchers at the University of Oulu deal with publishing in English and how they cooperate with language editors, they were asked to fill in an online questionnaire. The purpose of the questionnaire was to study what researchers think about cooperating with a language editor at the beginning, middle and end of the writing process. Another aim was to find out in which aspects of writing researchers need feedback and cooperation. Some of the questions brought out attitudes towards editing.

After receiving the answers to the questionnaire, six researchers were asked for interviews. The purpose of the interviews was to get further information about the cooperation between researchers and language editors.

2.1 Questionnaire

The questionnaire (appendix 1) was sent to the Finnish-speaking researchers at the University of Oulu. The questions were answered by 94 researchers out of 2 203 researchers. The informants were from almost all faculties of the University of Oulu. There were 66 percent male and 34 percent female informants. The average age of the informants was 44. They had published in English for 13.4 years on average. Among the 94 answerers there were 60 informants who had published in English for over 10 years. These experienced writers had published for 18.4 years on average.

In the questionnaire the researchers were asked questions such as “When do you cooperate with a language editor now?” and “When would you need interaction with the language editor during the writing process?” The questions were mostly multiple choice. Two open questions provided additional information about the researchers’ writing habits.

The IT Administration Services forwarded the online questionnaire to the Finnish-speaking researchers at the University of Oulu in December 2016.¹ The questionnaire was sent by e-mail two times, because a reminder of the e-mail was needed to get more answers to the questionnaire.

¹ I would like to thank the IT Administration Services of the University of Oulu.

2.2 Interviews

Six researchers were asked for interviews (appendix 2) in order to get more insight about cooperation between researchers and language editors. The informants were selected from 37 researchers who had answered in the questionnaire that they could be interviewed about the topic and who had given their contact information. In the interviews the researchers were asked what kind of experiences they had of cooperating with language editors and what kind of feedback they think is most useful for their writing.

The informants were selected for interviews based on their faculty. It was considered that this could bring different viewpoints to the discussion because different disciplines have their own conventions and ways to build an article. The ways to present the content of the study are different for example in qualitative and quantitative studies. It was also considered that there might be differences between faculties in the ways to get editing services.

The informants' experience in writing scientific articles varied. Most of the researchers were experienced in writing articles about their research subject. They had published in English from six to twenty years. Only one informant was less experienced in scientific writing. He had published in English for a year. One informant had changed discipline.

2.3 Citations

The answers to the interviews and the open questions in the questionnaire are cited anonymously in this thesis. The age of the researchers is marked on scales 20–30, 30–40, 40–50, 50–60 and 60–70. Research areas are marked by the faculties or institutes they belong to, i.e. Faculty of Humanities, Faculty of Information Technology and Electrical Engineering, Faculty of Medical Sciences, Faculty of Science, Faculty of Technology. Kerttu Saalasti instituutti and Oulu Business School. The titles of the researchers are Doctoral Student, Postdoctoral Researcher, Researcher, Senior Researcher, Professor, University Lecturer, Docent, Research Manager and Research Assistant. The titles of some informants could not be found out because they did not give their personal information, but only mentioned their research area.

2.4 Case study

This thesis is a case study. Case study is not a method in itself. Thomas and Meyers (2015) define it as a design frame – a scaffold that supports and guides inquiry. Within that scaffold the most appropriate methods for collecting and analyzing data are employed (pp. 64–65). Case studies are analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied holistically by one or more methods (p. 56). Rather than looking at a few variables in a large number of cases, the case inquirer looks at the complex interaction of many factors in a few cases (p. 6).

Thomas and Meyers (2015) argue that the validity of the case study cannot derive from its representativeness since it can never legitimately be claimed to form a representative sample of a larger set. The essence of selection must rest in the dynamic of the relation between subject and object (p. 57). The subject of a case study is in no sense a sample, representative of a wider population. Rather, the subject will be selected because it is an interesting or unusual or revealing example through which the features of the object can be investigated (p. 56). The object constitutes, then, the analytical frame within which the case is viewed and which the case exemplifies (p. 58). The development of theory, whether it be in ‘theory-testing’ or ‘theory-seeking’, is central to the dynamic of the relation between subject and object in a case study (p. 58).

In this study the subject is the cooperation between researchers and editors in writing scientific articles at the University of Oulu. The object, then, is the way in which the cooperation could be arranged so that it would give best results. The purpose of this study is intimately connected with the object of the study. As Thomas and Meyers (2015) note, the understanding that is required – the explanation that is needed – is related to the reason for doing the study, that is to say, the purpose (p. 59). This study can be considered as theory-seeking because there was no previous research about cooperation between researchers and language editors during the writing process of scientific articles.

According to Bill Gillham (2005) a research case study aims to investigate a social phenomenon (individual, group, institution, profession) in its contemporary context and does so by looking for multiple forms of evidence (p. 167). The ways of collecting data in this study were an online questionnaire and interviews. The interviews and the questionnaire serve different purposes. The questionnaire was used to carry out a preliminary survey and interviews were made to achieve a depth

of understanding (Gillham, 2005, p. 3). The questionnaire was a way to study the researchers' views about the different stages of the writing process of scientific articles. The interviews were made after the answers to the online questionnaire were received. The questions for the interviews were chosen so that they would give more information about the cooperation between the researcher and the language editor during the writing process.

In the questionnaire there were mostly multiple choice questions. Informants could also provide further information to field "Do you have something else to say about this subject?" The questionnaire was made using Webropol online survey tool.

The questions in the interviews were open, so the interviewees could determine their own answers (cf. Gillham, 2005, p. 3). The interviews interpret and qualify the findings from other data sources, i.e. the answers to the questionnaire (p. 167).

In this study the purpose of the research is to explore a little-known phenomenon, i.e. the cooperation between the language editor and the researcher in writing scientific articles. For this reason the early stages of research entailed learning what questions to ask, how to ask them, and who to ask them of (cf. Guest, MacQueen & Namey, 2012, p. 22).

The interviewees were asked questions like "What kind of editing services have you used? What are your experiences using them?" and "What do you expect from an editor? What kind of skills should he or she have?" They were also asked "What are your strong points and weaknesses in writing in English? And how does the language editor work on these?" and "Would you like to get feedback during the writing process?"

The interviews were semi-structured in the sense that the questions were preplanned. The questions were based on a preliminary reading of editing and feedback in writing magazine articles, answers to the questionnaire and personal experience of editing during the writing process of newspaper articles.

Semi-structured interviewing has a developed focus, on which it operates with a degree of precision, but nonetheless produces openness in the level and range of responses from the interviewee. In this study the same questions were asked of all those involved. To ensure equivalent coverage, the interviewees were prompted by supplementary questions if they did not spontaneously answer to

some of the subareas of interest. Approximately equivalent interview time was allowed in each case (cf. Gillham, 2005, pp. 70–71).

Five of the interviews were made face-to-face. One was made using a distance method, i.e. a skype call. The reason for this was that the researcher was abroad. The face-to-face interviews were made at the Linnanmaa campus area and Kieppi, the main building of the University of Oulu's Faculty of Medicine.

The answers were transcribed as soon as possible after the interviews. The reason for this was to prevent the recordings from accumulating. Some researchers answered the questions more thoroughly than others. For this reason the length of the interviews differed and they lasted 17–30 minutes. The answers were broken into themes for thematic analysis.

According to Guest et al. (2012) themes are units of meaning that are observed in the data by the reader of the text (p. 50). The themes that were observed in the interviews were the different ways in which the researchers used editing services, the qualities of a good language editor, the ways of cooperation between a researcher and an editor, the reasons for using editing services, the ways to improve feedback and writing and the ways to arrange editing services. In an exploratory study, the researcher carefully reads and rereads the data, looking for key words, trends, themes, or ideas in the data that will help outline the analysis, before any analysis takes place. Exploratory analyses are commonly used to generate hypotheses for further study (pp. 7–8). The goal of the analysis in this study is to explore and explain. The analytic purpose is synchronized with the research objectives (p. 32), i.e. to find out the ways in which editing and feedback during the writing process can help researchers to write scientific articles.

3 HOW TO WRITE A SCIENTIFIC ARTICLE?

As mentioned, the cooperation between researchers and language editors in writing scientific articles has not been studied empirically. For this reason the theoretical framework of this study had to be compiled from different sources. This section deals with writing scientific articles and the different aspects of cooperation and feedback during the writing process. The makings of a good scientific writer include the understanding of the house style of the journals, following guidelines for writing scientific texts, seeking feedback and finding ways to develop one's writing in English. This section deals with writing a scientific article and the importance of feedback.

3.1 Writing for a journal

In scientific articles it is very important to follow certain conventions and write fluent English. A well written article is more likely to get published in a high quality journal than a poorly written one. In one informant's words,

...we are competing on those higher ranked international journals, getting accepted. So the grammar must be correct. Because otherwise you seem a bit stupid, that you write so stupid language. And it is always a disadvantage for us non-native English speakers, that the major language is English.

Female, 30–40 years, Kerttu Saalasti Instituutti, Postdoctoral Researcher

Scientific journals have their own house styles, which means that they describe how articles should be written. Murray (2013a) points out that when writing to a scientific journal, a researcher is joining in a conversation. "Since everything in your article – content, focus, structure, style – will be shaped for a specific journal, save yourself time by deciding on your target journal and work out how to write in a way that suits that journal." (Have a strategy, make a plan, para. 2).

According to Guest et al. (2012) knowing and writing for your audience is one of the most basic rules of writing, and for good reason: "It is probably the single most important principle when writing about research, or anything for that matter. Who the audience is for your research report should guide

everything: the degree of specificity and length of certain sections of the report, the type of language used, the overall length, framing of the argument, and tone of voice” (p. 242).

A researcher needs first to decide where to publish an article. According to Petre and Rugg (2010) this involves consideration of the prestige of the journal, the degree of match between the chosen topic and the focus of the journal and the acceptance rates of the journal. “The usual strategy is to go for the most prestigious journal that you have a reasonable chance of being published in, which then raises questions of how to assess your chances” (p. 132).

Some researchers have published articles for a long time. Some are trying to get their first articles published. According to Chanock (2008) the constraints of interest, relevance, and quality are very difficult things to judge for a prospective author (p. E-1).

According to Guest et al. (2012) scientific audiences and journal readers vary with respect to their expectations of how a report should be written. Parameters are quite different across and within disciplines. Space limits also vary across journals and should be considered when planning a manuscript. For these reasons, and others, the first step in writing a manuscript for a peer-reviewed journal is to identify a specific journal for submission.

Look through recent copies of the journal and see what has been published. Conversely, identify where key articles for your topic are being published. Try to locate impact scores for journals in your field. And if you are in doubt about whether or not your study/manuscript may or may not be appropriate for a certain journal, send an e-mail to the editor with a brief summary of your idea; in many cases an editor can provide relatively clear direction (p. 243).

The focus of the journal is important. Petre and Rugg (2010) write that journals have to focus because of the sheer volume of research being published. A researcher therefore needs to make sure that his or her article is relevant to the journal. One way to find this out is to contact the editor and ask. The editor will be the person who makes the decision on how relevant your paper is (p. 133).

Petre and Rugg (2010) point out that with a bit of luck, the editor of the journal may like the idea behind the paper and give some suggestions on how to present it. The editor may for example tell the researcher which themes to emphasize and which to play down. This advice is important and should be treated seriously (p. 133).

Guest et al. (2012) write that once one has identified a journal, outlining and writing begins. The high-level outline for most scientific research reports includes an abstract, introduction/literature review, methods, findings or results, discussion, and/or conclusion. For academic audiences, jargon is also tolerated somewhat more than with other audiences. So too is a focus on the theoretical dimensions of the research problem. Another element that must be considered, especially with qualitative studies, is the amount of space allowed for a research report in any given journal. The range varies greatly, from less than 1,500 words to 5,000 or more. Qualitative studies typically require more space since the core findings are often presented in the form of a narrative (as opposed to tables), with supporting quotes (p. 243).

In Murray's (2013a) opinion, a researcher should analyse writing in journals in his or her field. She advises a prospective author to look closely at all first and last sentences.

The first sentence (usually) gives the rationale for research, and the last asserts a 'contribution to knowledge'... What constitutes new knowledge in this journal at this time? How can you construct a similar form of contribution from the work you did?... Scan the other sections of the articles: how are they structured? What are the components of the argument? Highlight all the topic sentences – the first sentences of every paragraph – to show the stages in the argument (Analyse writing in journals in your field, para. 1–2).

By doing this the author should be able to see the emerging taxonomy of writing genres in a particular journal. This should also help the author to define the different types of paper and different structures. After this, he or she can decide which structure will work best in his or her own paper (Analyse writing in journals in your field, para. 2).

Petre and Rugg (2010) advise a researcher to read the guidelines for contributors to the chosen journal. The guidelines are usually printed in the journal or are available on its website. The guidelines tell the word limits for articles, the procedures of handling tables and figures, the number of copies to submit etc. (p. 132).

The writer can do an outline before he or she writes or just start writing. In Murray's opinion both outlining and just writing are useful, and it is therefore a good idea to use both. The writer should, however, do a very detailed outline. Murray (2013a) guides the writer to outline the main sections and calibrate these with the target journal. He or she should also set word limits to sections, sub-

sections and, if need be, for sub-sub-sections. This involves deciding about the content one wants to include. This may take time and, in Murray's opinion, feedback would help the writer at this stage (Do an outline and just write, para. 1–2). Murray points out that the writer should get feedback from start to finish.

Even at the earliest stages, discuss your idea for a paper with four or five people, get feedback on your draft abstract. It will only take them a couple of minutes to read it and to respond. Do multiple revisions before you submit your article to the journal (Get feedback from start to finish, para. 1).

The writer can begin by using writing to develop his or her ideas or to document his or her work. At this point the writer can, in Murray's opinion, define the writing task by thinking about verbs, because they define purpose. These kinds of verbs are summarize, overview, critique, define, introduce, conclude, etc. (Do an outline and just write, para. 3).

Once the researcher has started writing, he or she should specify goals for writing and to monitor the extent to which he or she achieves them. This way one can learn to set realistic targets (Do a warm up before you write, para. 3).

When the writer submits the article and gets the reviewers' feedback, he or she should analyse the feedback and write a list of revision actions. The list should, Murray notes, specify how the writer has responded to the reviewers' feedback. When the article is resubmitted to the journal, the list should be included in the report. If the article is rejected, it is still useful to analyse feedback, work out why and revise it for somewhere else (Analyse reviewers' feedback on your submission, para. 2).

Belt, Möttönen and Härkönen (2011) have noticed that researchers often make the mistake of believing that writing an article is a separate phase to be done after completing the entire research. This is why they recommend that researchers start writing much sooner. They think it is not wise to wait for the moment when one feels that he or she understands "everything" needed for writing articles (p. 7). According to Belt et al. (2011) it is more sensible to start learning to write piece-by-piece, better enabling the perception of what to do and when, and thus aiding the avoidance of unnecessary work.

Understanding of the studied matter is enhanced while working on it. Starting the writing process early gradually lowers the threshold for publishing and through gained experience the chances of getting the work accepted for publication in better journals will improve (p. 7).

Belt et al. (2011) think that writing articles is learned best through gaining writing experience. A researcher should, in their opinion, initiate the learning process by making written notes of any ideas and documenting research processes and initial results. This way a researcher will generate text that can potentially be utilised later for articles (p. 7). A researcher should also remember to follow precisely the format instructions of his or her target journal. Careful review before submission is of great importance. Belt et al. suggest that a good co-author can help in finalising the article (p. 17).

3.2 Writing process and feedback

Many authors mention the importance of feedback for academic writing (e.g. Belt et al., 2011; Murray, 2013a). Writing scientific articles, however, is usually described as a process, which ends in proofreading and revising. According to Murray (2013b) a published article creates an illusion of linear progression, but academic writing actually is a dynamic, cyclical process. Murray notes that while the merits of published articles are often discussed, there is relatively little discussion of how writing actually gets done. Murray writes that writing is usually seen as a solitary act, but it might benefit from discussion and feedback (pp. 12–15). In journalism it has been proved to be very fruitful to cooperate with a copy editor from the very beginning of writing. With the help of cooperation, planning and making use of story structures it is easier to get articles ready in time (see e.g. Autio, 2010; Eloranta, 2015).

Researchers seek feedback on the content, structure and style of an article from their peers, coauthors and supervisors (see e.g. Belt et al., 2011, p. 8). Many researchers, according to the questionnaire and the interviews made in this study, are accustomed to contact the language editor at the end of the writing process. This means that they polish their article as far as possible and then send it to proofreading.

In journalism, as in science, the purpose of editing is to make a text fit for purpose (cf. Töyry et al., 2008, p. 22). According to Töyry et al. (2008) giving feedback about magazine articles means

comparing the work in question to the aims that have been set before (p. 117). Increasing competition has led magazines to specialize. For this reason they have developed concepts for their content and layout. The concepts help the magazines to reach the quality and the target group they desire. The more detailed the concept is, the more editing is needed at every stage of the writing process (p. 16).

In journalism an editor gives feedback to a journalist during the whole writing process. Analytical feedback gives a journalist a possibility to develop as a writer (pp. 114–115). When editing has been practiced during the whole writing process, it is easy to give and receive feedback after the work is done. Most of the discussion about the article has been going on already during the different stages of the work (p. 116).

Belt et al. (2011) write that seeking feedback is vital for learning and putting together a good article. From the perspective of effectiveness it is important to ask feedback in small increments and as frequently as possible: “This way the feedback is more precise and easier to utilise. You should start seeking for comments already at the stage when you only have an initial idea for an article” (p. 8).

In *Supporting Research Writing: Roles and Challenges in Multilingual Publishing* a group of language professionals (Matarese, 2013) aim to illustrate the range of writing support services on offer to academic authors seeking to publish in Europe. They suggest that the main areas of writing support are teaching, translating and editing (p. xxvi).

The language professionals (in Matarese, 2013) note that in real-life situations, non-native English speaking authors may best be served by translators who are able to edit and by editors who can guide rewriting. Effective writing support can be considered as a fluid continuum in which the boundaries between education, translation and editing are inherently fuzzy (p. xxvi).

Texts written by non-native English speakers require an extra dimension to their editing especially when they contain linguistic and cultural interference. Because of this the editor has to move out of the sphere of editing and into that of translation and work at the interface between the two (Matarese, 2013, p. 151).

According to Karen Bennett (in Matarese, 2013) the dominance of English in academic publishing leads to the fact that academic translators working into English are obliged to orient their translations toward Anglo-Saxon norms and values in order to ensure acceptance by international journals.

Bennett writes that the people who control admission to the most prestigious journals are notoriously unsympathetic to the problems faced by foreign scholars. They may interpret any deviations from the norm as authorial, or even scientific, incompetence (pp. 93–95).

According to Bennett, translators of academic research are necessarily motivated by pragmatic matters. They try to help their clients to achieve real-life goals, such as publication in a foreign journal. For this reason a translator has to have in-depth knowledge of target culture expectations in that particular discipline in order to make the most effective linguistic choices. The translator's task may also include an interpersonal component when he or she communicates with an author in order to create a text that conforms to the expectations of the target readership while remaining as faithful as possible to the intention of the original author (p. 94).

Glasman-Deal (2010) argues that developing skills to write up one's own research in English is the only way for a researcher to join the international science community.

If you depend on English speakers to translate your writing, their translation may not represent exactly what you intended. If you depend on proofreaders to correct your English, they may not notice some errors, because a sentence which is grammatically correct is still 'wrong' if it doesn't mean what you intended. Also, a proofreader may not check whether your writing fits the conventional 'science research' patterns. (p. vi).

Glasman-Deal (2010) claims that science writing is much easier than it looks. "You may feel that you don't have the time to improve your English, but you already know most of what you need from the reading you have done over the years" (p. vi). In her book *Science Research Writing for Non-native Speakers of English* (Glasman-Deal, H., 2010) she aims to help the reader to discover a template or model for science writing. Then she provides grammar and vocabulary tools to operate that model.

Joy Burrough-Boenisch (in Matarese, 2013) notes that editing means different things to different professionals, even to language professionals (p. 141). Burrough-Boenisch lists types of editors and editing (pp. 152–153). The most relevant for the present paper are listed here.

Types of editors and editing

Authors' editor An editor working with (and often for) the author, editing substantively to achieve a text that is fit for purpose.

Copy-editing Preparing copy for publication on paper or on the Internet.

Developmental editing Refers to developing the text together with the author, starting at the initial planning stage.

Substantive editing 'Deep' editing, with major changes to remove redundancy and reorganize (restructure) the text. Also entails checking that additional material (tables, figures, references) is consistent and accurate, and rewriting, or questioning or adding additional material.

Editor A person who edits.

Journal editor In many scientific journals an academic who receives manuscripts submitted for publication to a journal, coordinates their peer reviewing and has the final decision on publication.

Language editing Honing the language of a manuscript to make it fit for purpose. In the case of non-native English, this also involves correcting learner English.

Proofreading Checking a completed manuscript to remove superficial errors (such as spelling mistakes) and inconsistencies. Translators also use the term to refer to checking the final translation.

Technical editing Editing technical material (and thus ensuring consistency and accuracy of terminology, units of measurement, figures, tables, equations, etc.)

According to Joy Burrough-Boenisch and Valerie Matarese (in Matarese, 2013) the substantive editing of a research article is usually done by an authors' editor who, working closely with authors, improves a document to make it fit for publication (pp. 173–174). Depending on the quality of the draft, author editing involves multiple levels of intervention: language editing, substantive editing, possibly developmental editing, and support for peer review process (p. xxix). What an authors' editor can offer for a client depends on his or her own skills and knowledge, particularly his or her subject specialty and familiarity with the genre. Also the author's willingness to have changes made in a particular text and the time and budget available have an influence on how much editing is done (p. 176). The goals are to give authors a credible, authoritative voice in English and to improve their chances of publication success (p. xxix).

Sally Burgess and Margaret Gargill (in Matarese, 2013) describe the use of genre analysis and corpus linguistics to teach research writing at university level. In their opinion, knowledge of these approaches may benefit language professionals who work individually with authors. The research article is a genre, and articles written and read in different research fields can be thought of as sub-genres, because they may have different purposes, audiences or structures. By using the genre approach, then, authors can develop their writing skills through examining real examples from literature (pp. 55–56). The genre approach allows for collaborative work between an author and a language professional and enables an effective construction of meaning through engaging with authentic examples of the type of text the author is aiming to produce (p. 70). As a result, the authors of research articles will be able to produce text that more closely matches the expectations of their intended readers (p. 94). Teaching grammar, style and genre requirements will make editors more alert. They will also be more confident in explaining editorial amendments (p. 219).

4 ANALYSIS OF THE QUESTIONNAIRE

In this section the answers to the questionnaire are discussed. Most of the answers to the multiple choice questions are presented in tables. Answers to open questions are used to bring out more information about the informants' views about cooperation with language editors.

The questionnaire was answered by 94 Finnish-speaking researchers from different fields of study. E-mails about the questionnaire were sent to 2 203 Finnish-speaking researchers.

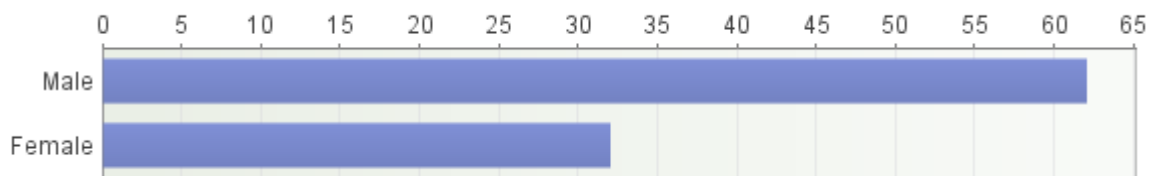
In the questionnaire the researchers were asked questions such as “When do you cooperate with a language editor now?” and “Do you think that you could benefit from more cooperation with a language editor?” They were also asked questions like “When would you need interaction with the language editor during the writing process?” and “In which aspects of writing do you think that you could benefit from more cooperation with a language editor?”

Gender and age (questions 1 and 2) of the informants were asked as background questions. The informants were also asked how many years they had been publishing in English (question 3) and their field of research (question 4).

Table 1.

Question 1. Gender

Answerers: 94



Approximately 66 percent of the informants were male and 34 percent female (table 1). The average age was 44 years. The informants had published for 13.4 years on average. Among the 94 answerers

there were 60 informants who had published in English for over 10 years. These experienced writers had published for 18.4 years on average. The informants who answered the questionnaire were from almost all faculties of the University of Oulu.

4.1 Views about cooperation

The informants were asked questions such as “When do you cooperate with a language editor now?” and “Do you think that you could benefit from more cooperation with a language editor?” to find out the present situation and the willingness to cooperate with a language editor. The informants also get feedback from their colleagues, coauthors and supervisors and their role was mentioned in the answers.

4.1.1 Cooperating with a language editor

Most of the informants answered that they cooperate with a language editor at the end of the writing process. The researchers reported in their answers to the questionnaire that they send a manuscript to a language editor before they send it to a journal.

When the article is as ready as possible from the content perspective - meaning that the language editing is the last step before submitting.

Male, 50–60 years, Faculty of Information Technology and Electronical Engineering, PhD Student

I contact my language editor after I have revised my manuscripts according to the journal reviewer’s comments. Then he checks the language of the manuscript and I send it back to the journal editor.

Female, 40–50 years, Faculty of Humanities, Postdoctoral Researcher

Before submitting the paper to a journal. Every time from the initial submission through resubmissions to the final accepted paper.

Female, 30–40 years, Oulu Business School, University Lecturer

Prior to submitting a work or a thesis, not during the process. Mostly for grammar check/error checking.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Doctoral Researcher

The cooperation will be done if the journal has given some complaints about the manuscript (rarely).

Female, 40–50 years, Faculty of Science

Many research papers are coauthored and for this reason they are commented on by many different people. According to the researchers their colleagues give comments also on the language. Researchers pointed out that if there are native English speakers in the research group, it is not necessary to contact a language editor.

Practically, I do not do that anymore. I am writing lot of international jointpapers. It seems that reviewers are complaining about grammatic when ever author is not a native English writer.

Male, 40–50 years, Faculty of Technology, Postdoctoral researcher

I don't. Normally in this field there is no cooperation with language editors. The (possible) improvement of the language takes place in the draft version of the paper by the collaboration.

Male, 50–60 years, Faculty of Science, Research Manager

In some research areas it may be hard to find a language editor who would be familiar with the field of research and its terminology. Some researchers do not use language editors because their unit does not do so. In some cases the copy-editor of the journal edits the work.

I haven't co-operated because I don't know the connections.

Female, 50–60 years, Faculty of Medical Sciences, Professor

I have not cooperated with any language editor. Our unit does not use language editors. Diploma and doctoral thesis are the only ones which are entitled to use a language editor.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Postdoctoral researcher

I have seldom if ever worked with a specialized language editor. Instead, usually the process of finalizing an article or a book manuscript for publication involves working with a copy-editor who has also checked my language. Typically, this is toward the very end of the process, after the manuscript has already passed the peer review.

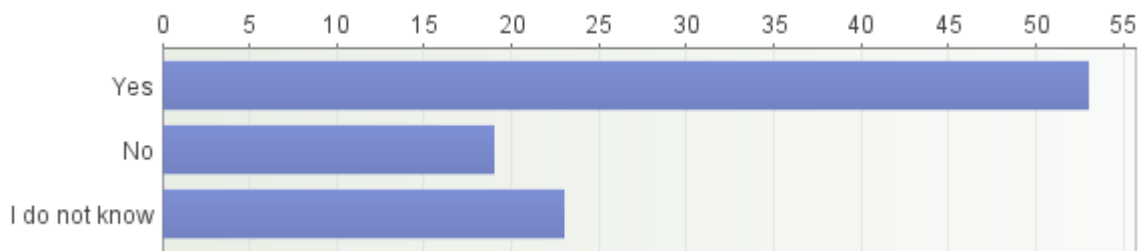
Male, 40–50 years, Faculty of Humanities, University Lecturer

4.1.2 Benefiting from more cooperation

Table 2.

Question 6. Do you think that you could benefit from more cooperation with a language editor?

Answerers: 94



Most of the informants reported that they could benefit from more cooperation with a language editor (table 6). Many informants answered this question “I do not know”. Approximately one fifth of the informants did not think that they could benefit from more cooperation with a language editor. The researchers had mentioned this subject only in some comments.

I have many times wanted to discuss my language choices with a language editor. Could I write this way and why my text has been corrected that way, although my suggestion was quite good. I have not, however, dared to do this via e-mail.

Female, 20–30 years, Faculty of Technology, PhD Student

In case of regular level publications I can cope well without any language editing by others. In case of top level journals the services of an experienced copy editor may be of use.

Male, 40–50 years, Faculty of Technology

If you are talking about language aid, how anybody professional in the field could provide me any help with thermodynamics of phosphorus in cooling sewage waters or any other content of my papers.

Female, 50–60 years, Faculty of Science

Research groups to which I have belonged have never used the services of language editors. During the past 25 (or 30) years my English skills have obviously improved so much that the language has very seldom been a problem in getting my/our studies published in international journals. We only publish in English. The style of our writing could certainly be improved but we actually never even consider using language experts to improve our manuscripts. Instead, coauthors make suggestions and corrections on the language at the final stages of the preparation of manuscripts. Use of language editors is also a cost issue. As too little money is usually given to research, one doesn't want to use it for secondary purposes if it can be avoided.

Male, 50–60 years, Faculty of Science, Senior Researcher

4.2 Views about editing

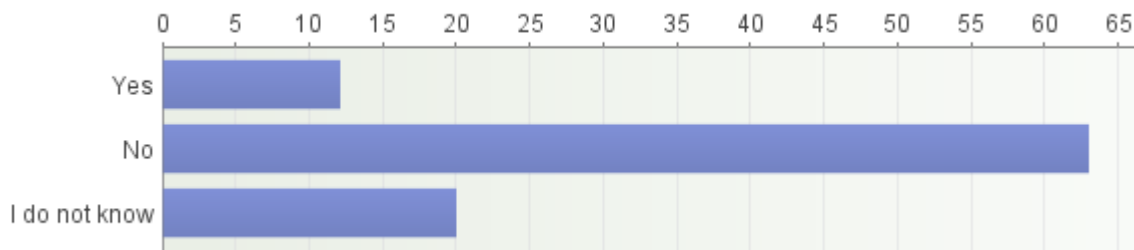
The researchers were asked, for example, whether they would like to go through the writing task with a language editor before beginning to write. The researchers were also asked, whether defining the writing task helps them to cooperate with a language editor. The aim of the questions was to find out what kind of feedback and cooperation the researchers need for their writing.

4.2.1 Going through the writing task

Table 3.

Question 7. Would you like to go through the writing task with a language editor before beginning to write?

Answerers: 94



The majority of the informants would not like to discuss with a language editor before beginning to write. The informants mentioned this subject in some answers to the open questions. The researchers said in the answers that at the beginning of the writing process they need to deal with the content.

They might be very helpful after the acceptance of an article, to fine tune it before publication. Before the process, or during it, they are useless since the articles at the writing and review phases are dominated by the content. The content should come from the author, not from the editors, i.e. in scientific articles. Other types of articles might be a different story.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Postdoctoral researcher

Although researchers want to concentrate on the content before beginning to write, using writing techniques could help them at this stage. According to a long time editor, teacher and a writer William Zinsser (2006) all writing is ultimately problem solving. A researcher who is writing to a journal has to make the same decisions that confront every writer. These are the matters of selection, reduction, organization and tone (p. xii). As Zinsser (2006) summarizes in his book:

It may be a problem of how to obtain the facts or how to organize the material. It may be the problem of approach or attitude, tone or style. Whatever it is, it has to be confronted and solved (p. 49).

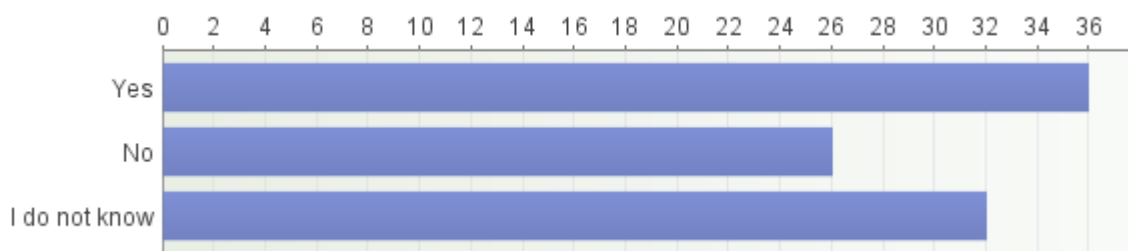
According to Murray (2013b) researchers should use generative writing strategies and structuring strategies. Generative strategies, like drafting, serve three purposes in the writing process: getting into the writing habit, making notes of ideas to be developed further and solving writing problems like writing blocks. Structuring strategies, like outlining, serve two purposes: producing the kind of text that is appropriate for journals, focusing the researcher's thinking on content and determining the proportions of the parts of the paper (p. 228).

4.2.2 Defining the writing task

Table 4.

Question 8. Do you think that a close definition of the writing task, i.e. the content, structure, focus and style of an article, would help you to write and to communicate with a language editor?

Answerers: 94



Over one third of the informants thought that a close definition of the writing task, i.e. defining the content, structure, focus and style of an article, would help them to write and to communicate better with a language editor (table 4). About one third of the informants answered this question “I do not know.” About one fourth of the informants did not think that detailed information about the writing task would help them in the process.

I would never allow a language editor to affect the contents or structure of my text and I do not think that they could be of any help with it. Writing is the most important part of my work and I'm a professional in it. Editing is fine and of course I would like to be able to write more expressive language.

Female, 40–50 years, Faculty of Information Technology and Electronical Engineering

There are benefits in defining the writing task at the beginning of the writing process. When the goals of the article have been set, it is easier for an editor to give feedback during the writing process (e.g. Töyry et al., 2008, p. 117).

Zinsser (2006) has found that the most undertaught and underestimated skill in nonfiction writing is how to organize a long article. According to him, “Every editor of a lengthy manuscript knows that grim moment of irreversible chaos. The writer, his eye on the finish line, never gave enough thought to how to run the race” (p. 254).

Zinsser (2006) writes that a good editor brings to a piece of writing an objective eye that the writer has long since lost.

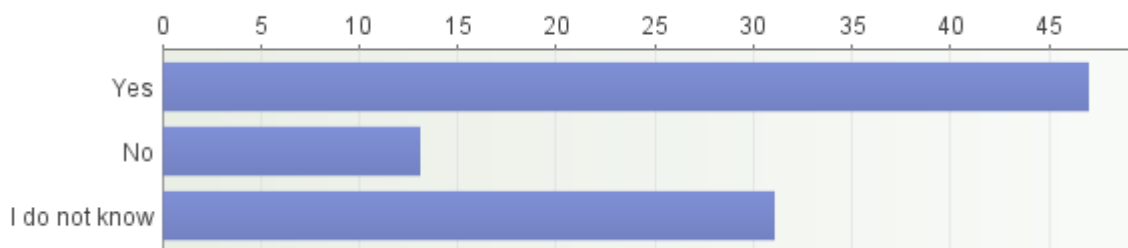
There is no end of ways an editor can improve manuscript: pruning, shaping, clarifying, tidying a hundred inconsistencies of tense and pronoun and location and tone, noticing all the sentences that could be read in two different ways, dividing awkward long sentences into short ones, putting the writer back in the main road if he has strayed down a side path, building bridges where the writer has lost the reader by not paying attention to his transitions, questioning matters of judgement and taste (pp. 299–300).

4.2.3 Getting advice

Table 5.

Question 9. Does your language editor offer you enough advice?

Answerers: 89



Almost a half of the informants reported that their language editor offers them enough advice (table 9). About one third of the informants did not know whether their language editor offers them enough advice or not. The informants may have answered ‘I do not know’ because they did not use a language editor. The answers may also have been affected by the fact that the editing services had been tendered out recently. For that reason it may have been difficult to know what kind of advice the researchers would receive in the future. Some informants might not have been aware of what kind of information a language editor could give to them. Informants who answered no to this question would probably like to get more advice.

The researchers commented to an open field in the questionnaire that the problems with cooperation have to do with language editors’ lack of subject knowledge and unawareness of the conventions of a specific field.

Often the problem with language editors is that they are not familiar with the topic of research or the conventions of a specific field. Earlier we used specific editors that we knew to know this area of research. However, now these services are tendered out and the language editor can be anyone. Also, the editors often seem unwilling to answer questions after they have gone through the text.

Female, 30–40 years, Faculty of Humanities, University Lecturer

The major issue with language editors is that they do not have subject expertise. Therefore, they just correct language mistakes, but do not innovate for better text. Before we could choose freely language editor, but now we have to use certified firms. This has reduced the quality of the language editing. On the other hand, if some of the coauthors are native English speakers, I do not have to rely on paid external language editing.

Male, 30–40 years, Faculty of Humanities, Researcher

In our field many universities actually use language editors / professionals solely for the purpose of writing publications and grant applications, based on the content provided by the actual authors. This is something we have been briefly discussing in our research group as well and would be an interesting idea. However, this would require further specialisation and expertise from the editor.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Doctoral Researcher

4.3 Views about writing

The researchers were asked questions about cooperating with a language editor during the writing process. They were also asked how they achieve their aims when they are writing in English. These questions provided information about the stages and aspects of writing in which the researchers need advice.

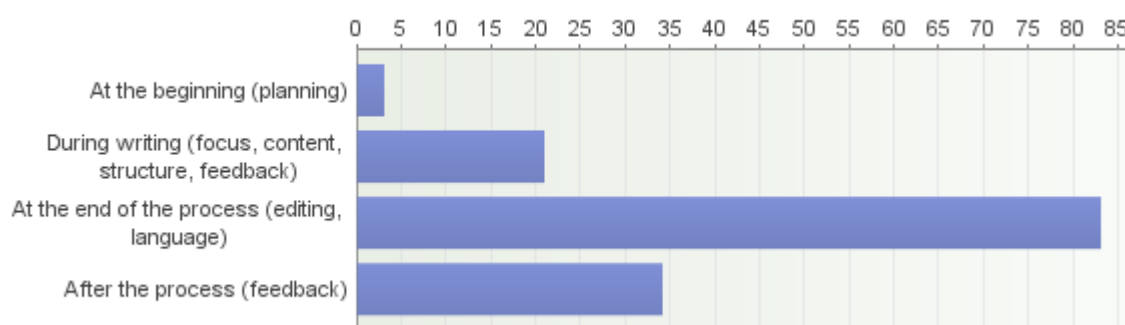
4.3.1 Interaction during the writing process

Table 6.

Question 10. When would you need interaction with the language editor during the writing process?

You can select more than one option.

Answerers: 88



Most of the informants thought that they need interaction with a language editor at the end of the writing process (table 6). Many informants also told that they would like to get feedback after the writing process. Over one fifth would like to interact with a language editor during writing.

I think it is best to have an editor who understands what you are writing about. You know your vocabulary, but tend to write English the way you write Finnish, and that does not always work. Having “an editor” from the mid-way of your writing process has helped me to improve my style.

Female, 30–40 years, Faculty of Humanities, Postdoctoral Researcher

The main problems during the writing in English are originating from the prepositions. I have lost basically all the actual rules and currently I make the selections of prepositions in certain cases based on what sounds correct instead of checking how it should be. It would be also useful to learn more synonyms or ways of writing the sentences in different way instead of repeating the same sentences all over again. With editor I have had sometimes problems, since the editor does not know the scientific discipline exactly and the corrections made change the meaning of the sentence in such a way that it is not scientifically correct anymore. It would be very useful to have editors that are specialized in the vocabulary of specific scientific fields.

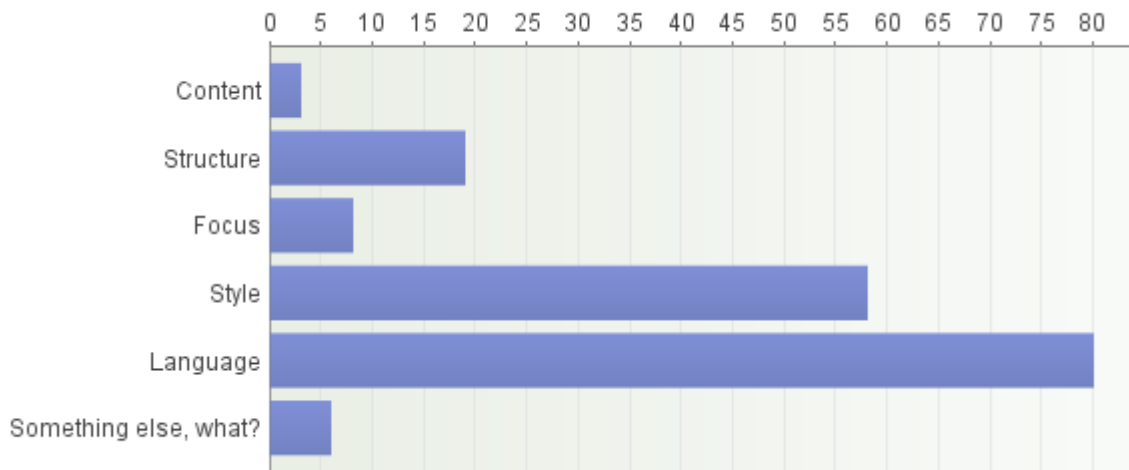
Female, 40–50 years, Faculty of Technology, Docent

4.3.2 Aspects of writing

Table 7.

Question 11. In which aspects of writing do you think that you could benefit from more cooperation with a language editor? You can select more than one aspect.

Answerers: 89



Most of the informants answered that they could benefit from more cooperation with a language editor in improving the language of the article (table 7). The informants seemed to be willing to cooperate with a language editor also in improving the style and structure of the article, and to some extent in sharpening the focus and the content.

I am quite good at English and I need to cooperate with a language editor mainly at the end of the writing process. I am interested in nuances and prepositions, etc.

Female, 20–30 years, Faculty of Technology, PhD Student

The thing is that I can write sufficiently “correct” English - the editors don't usually have much to say - but whatever they say is very important - fine tuning the text. For some international publications, the “native speaker” editors have not required a language-check because they've done the minor editions themselves.

Female, 60–70 years, Faculty of Humanities, University Lecturer

In this question the informants were able to give their own suggestions about the aspects of writing in which they thought they could benefit from more cooperation with a language editor.

Question 11. Something else, what?

- none
- story building
- spelling (UK, US)
- word meanings
- Before my students send the MS to me
- English idioms and native-sounding sentence structures

For scientists word meanings are important, because the content of a study needs to be conveyed to the reader. Also the differences between British and American English need to be considered when writing a scientific article.

In one informant’s opinion students would also benefit from more cooperation with a language editor. As he explains,

The service should be offered for the under- and postgraduate students already during the writing process. They would most likely learn how to write properly faster, and learn more than from my comments.

Male, 50–60 years, Faculty of Medical Sciences, Professor

Joy Burrough-Boenisch (in Matarese, 2013), for example, describes an approach to educating authors in aspects of academic writing through which she terms ‘didactic editing’. Focusing on doctoral students writing a thesis, she illustrates how amendments to texts can be accompanied by comments that explain the changes and anticipate any misunderstandings in the part of the author. She argues

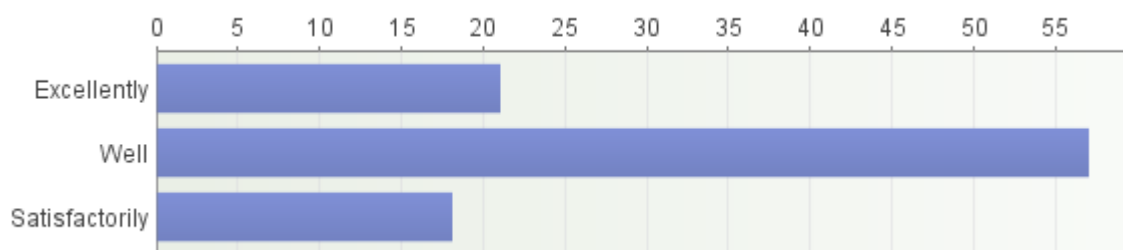
that proactive, didactic editing benefits both authors and their editors who, editing to teach, consolidate their knowledge and improve the quality of their work (p. xxix).

4.3.3 Achieving aims

Table 8.

Question 12. How successfully do you think that you achieve your aims when you write about your research in English?

Answerers: 93



Most of the informants thought that they achieve their goals well when they write in English (table 8). About one fifth of the informants estimated that they perform excellently. Almost the same amount of the informants evaluated their own performance satisfactory. At the same time, many researchers write in teams. As a team member it is difficult to have a say on how to write an article.

The problematic issue for me is that I also write in multidisciplinary teams with people who are not from languages. There the style may be quite different and the text would require quite a lot of work for clarity even if the clear errors are removed. So, I am not quite happy with the result because I would rather write in a different way to help the reader's work, and it would take too much time to start rewriting a whole text. So, collaboration between people from different disciplines may be a challenge because the disciplines have their own conventions, writing styles, and ways to build an article (= the whole research report) even if you are working with the same theoretical and methodological framework. I would also like to make my own writing for my own academic purposes more lively - I tend to stick to the same style of argumentation.

Female, 60–70 years, Faculty of Humanities, University Lecturer

When several people are collaborating in writing an article, writers may simply assign a section to each and compile the sections. Janice and Robert Matthews (Matthews & Matthews, 2016) have noticed that it can lead for example to an illogical strategy, weak transitions, and inconsistencies in terminology and language use. In this kind of situation someone needs to go through the paper and correct the errors. The best scientific writing should, however, be read as though written by a single author, not a committee. An alternative method of dividing responsibility is to designate as coordinator either the senior author or the person assumed to be the best writer in the group. This person should take responsibility for the Outline, Introduction, Summary or Abstract, and Conclusions. The other authors should divide responsibility for the other sections (p. 46).

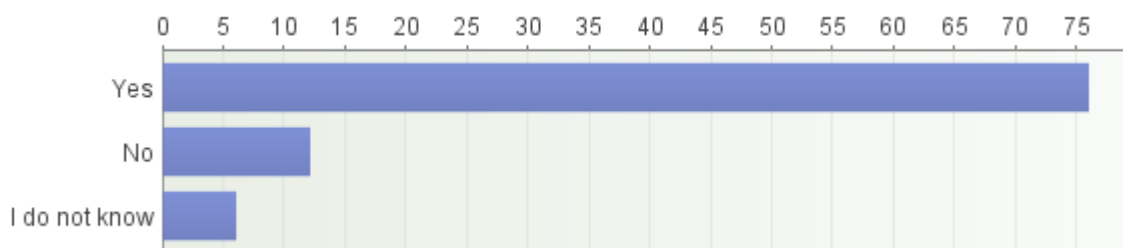
Matthews and Matthews (2016) note that the members of the group should communicate often and clearly. The coordinator should have licence to change any section in order to make it flow smoothly into the whole. After this, all coauthors should be given a possibility to comment on the draft. Before sending the final version to the journal, all coauthors should read and approve it (p. 46).

4.3.4 Feedback for future publications

Table 9.

Question 13. Would you like a language editor to give you feedback to improve your level of written English for future publications?

Answerers: 94



Most of the informants reported that they would like to receive feedback to improve their level of written English for future publications (table 9). As one researcher summarized,

I think that my skills of scientific writing in English have increased during the years. It can be partly addressed to the feedback that I have received from the language editor.

Male, 30–40 years, Faculty of Technology, Postdoctoral Researcher

Töyry et al. (2008) point out that when the editor makes changes to a text, he or she needs to be able to explain them to the writer. If the editor has time to guide the writer to make the changes to the text, it may increase the quality of the writer's articles in the future (p. 93).

5 ANALYSIS OF THE INTERVIEWS

Six researchers were interviewed for this study in order to get a clear picture of the cooperation between researchers and language editors. Another aim was to find out when researchers need feedback to support their writing. The interviews were conducted after getting answers to the online questionnaire. The questions for the interviews were chosen so that they would give more information about the cooperation between the researcher and the language editor during the writing process.

In the interviews the researchers were asked what kind of experiences they had of using editing services and what they expected from an editor. They were also asked when they needed cooperation with a language editor during the writing process and what kind of feedback they found most helpful for their writing.

Among the themes that rose from the interviews were the different ways in which the researchers used editing services, the qualities of a good language editor, the ways of cooperation between researcher and editor, the reasons for using editing services, the means to improve feedback and writing and the ways to arrange editing services.

5.1 How do researchers use editing services?

The researchers had used the editing services variably. Most of the researchers had used editing services at the end of the writing process. According to the interviews, the researchers had used both companies and individual editors to edit their texts. Some informants mentioned that they did not need to contact an editor if they had native English speakers in their research group. In these cases the native English speakers, who were also colleagues, could give feedback and edit the texts. Some researchers said that they had native English speakers as friends and that they could contact them when they needed help with writing and editing a scientific article. Some researchers had been able to meet editors personally, especially when they were coauthors and friends. The usual way to get comments was by e-mail.

Some of the researchers had had to change editors after the competitive tendering of the editing services, because they had been required to use certified editors. Those researchers preferred the service they had had before tendering. One researcher said that the language editor they used before was more experienced in scientific writing.

...I think that it was little bit better before. He was probably more experienced in editing the papers, not in our area, but generally. Maybe before we also got some more comments on the structure of the text. It seemed that he had used more time on it. It was not just on the language, but the idea of presenting the things. It was like more complete.

Male, 30–40 years, Faculty of Technology, Postdoctoral Researcher

The researchers said that before the competitive tendering it had been easier to get comments and suggestions for improving the article during the writing process. One researcher, who had used his friend to edit his texts, said that the friend knew his field of science and was able to suggest improvements to the arguments. The service he has used after the competitive tendering only makes corrections to the use of language.

...the university could do something and be more flexible about giving possibilities for researchers to find language editors. Because now it has limited possibilities to find them.

Male, 30–40 years, Faculty of Humanities, Researcher

Now when I use this Hansel services, they do not know anything about my field of science. So they are just doing the copyediting and correcting the English yes, but not anything else. So this is, I think, one minus of using the Hansel editing services, where the copy editors just correct the English.

Male, 30–40 years, Faculty of Humanities, Researcher

The researchers reported that faculties usually pay for editing once for an article. Some reported that editing has to be paid from the research budget. There were differences in getting editing services.

If the paper is related to a project, research projects should have money for language editing. But then that is not always the case. And in that case, the home department or faculty should have funds by which the language editing could be paid...The university has a policy that open access should be favored. But I don't know does the university have funding for open access...But so basically, when we are applying for project funding, an emphasis should be put to that we mark the language editing also to the budget.

Male, 30–40 years, Faculty of Humanities, Researcher

Our faculty pays for editing, but it is once for an article. So in case there is major revisions, you either have to pay yourself or just do it yourself. But it is very important, that the faculty supports this, it is crucial. It is very important that we get the help. So it is an issue, but nowadays it works for us at least. It is ok. I don't complain.

Male, 60–70 years, Faculty of Medical Sciences, Professor

Funding is a big issue. That, I think, is one of the main reasons that we use editing services so seldom, because we don't have any funding to pay the editors. For the proofreading of doctoral thesis or such it is quite common that department helps for paying, but for scientific papers you send to journals, you should be able to pay for editing from the project funds, which are scarce. So, when you need to think that are you going to buy some reagent for the lab, or are you going to pay for an editor, you buy the reagent for the lab.

Female, 40–50 years, Faculty of Science, Senior Researcher

I think it is paid by our laboratory, so the funding is not an issue. It is not an issue, because it is still like a small amount of money, because we do not use it so much. We don't have so big group. We can use it if it is necessary.

Male, 30–40 years, Faculty of Technology, Postdoctoral Researcher

For us, fortunately, it hasn't been an issue...basically we have never been questioned whether we are allowed to use the services or not. Quite opposite. We are encouraged to send out the articles.

Female, 30–40 years, Kerttu Saalasti Instituutti, Postdoctoral Researcher

5.2 What makes a good language editor?

Most of the researchers interviewed in this study expected that the language editor is a native English speaker. He or she should also preferably know the area of research the researcher is writing about. He or she should also know the terminology of the research area. As one researcher puts it,

It is not easy to find a good language editor. If you just talk about the grammar, then it is easy. But when you want to have a person, who has knowledge and skills of editing and suggesting different kind of ways to express certain items. It is very important to get suggestions, different kind of suggestions. And depending on the forum where the article for example is planned to be submitted, it is very important for the researcher to be able to discuss these, at least get different kind of suggestions and ideas how to present something.

Male, 60–70 years, Faculty of Medical Sciences, Professor

One researcher said that it would be ideal if an editor really knew her area of research. She did not think that it is very realistic to find someone who really knows the specific area, but an editor may have some experience of research areas related to it. She reported that she usually contacts the editing company online and sends the manuscript for proofreading.

I am not sure if these editors I have been in contact with, what kind of understanding they have had. I still think they have done a pretty good job. So I have been satisfied. I don't know about their background. There isn't any option to choose or suggest the research area, I think, when we submit manuscripts for commenting. Maybe if they could have a question from which research area you come from... That could be an extra option.

Female, 30–40 years, Kerttu Saalasti Instituutti, Postdoctoral Researcher

Another researcher considered that the knowledge of the field of science is important.

If the copy editor doesn't know the subject area, then he or she might correct the sentences in a way that doesn't fit to the overall discuss of the science in that field, so they may do some strange choices.

Male, 30–40 years, Faculty of Humanities, Researcher

The researcher said that a language editor should not only be able to correct the language errors, but also be motivated to improve the paper together with the researcher.

It is a bonus if they are not only correcting the English but rewording the sentences in more complex ways... And one skill is motivation to improve the overall presentation, not just the language.

Male, 30–40 years, Faculty of Humanities, Researcher

According to one researcher a language expert should, for example, be able to make suggestions about how to highlight some points of the text. He or she should also be willing and capable of communicating after the work.

...especially different solutions and options and suggestions are the best part. Because they might have some ideas, which I don't have any clue of.

Male, 60–70 years, Faculty of Medical Sciences, Professor

The researchers seemed to have quite little information about the language editors who edit their texts. Sally Burgess and Theresa Lillis point out (Matarese, 2013) that there is a need to raise awareness of the range of activities that facilitate academic writing and of the dynamics of the working relationships between authors and language professionals. Burgess and Lillis note that language professionals, namely translators, editors, language teachers and other writing consultants, support academic publication in various ways, but the full scope of their work remains largely unexplored. This lack of information creates problems for language professionals and authors. Therefore there should be a broader understanding of the services available, so that authors could identify the most appropriate language professionals to serve their needs. The language professionals themselves should have a clear idea of their remit, so that they could advise authors effectively on what they can expect from the service on offer. Language professionals must be able to clearly communicate the nature and limitations of the services they provide. Furthermore, they must recognize what kind of service meets their clients' needs (pp. 1–3).

5.3 Cooperation between researcher and editor

The researchers said that they would prefer to meet language editors personally. Many times this has not been possible. They would also like to cooperate with the same editor, so that he or she can learn the ways of writing in a particular field of study and get used to the types of articles the researcher is writing. In one researcher's words,

...this is the biggest problem. You can get grammar services, it is not a problem. You can get people nowadays, commercial companies, who sell these services. They go through the text once. They might check the grammar, might edit a little bit, but there is no more contact after that. This is the biggest problem, to have personal contact, to be able to finalize the text exactly how you want it.

Male, 60–70 years, Faculty of Medical Sciences, Professor

The researchers reported that they wanted to cooperate with a language editor during the writing process. Most of them did not, however, want to cooperate with a language editor at the very beginning of the writing process. The reason for this was that they want to write their own thoughts down first. After they had made an outline of the thesis, they were ready to discuss it with a language editor.

At that point when the outline and structure is there and things are more or less there and then you need to think how to form things and say them better or emphasize something. In that kind of places, yes, that (feedback) would help.

Female, 40–50 years, Faculty of Science, Senior Researcher

Some of the researchers said that they would like to discuss with a language editor also at the beginning of the writing process. This would, in their opinion, help them to choose the right terms already at the beginning of the writing process.

...if there is like choice of some central term, for instance, so then you save time when you do not have to do so many changes, if you already from the beginning know that this is the one I am going to use and you don't have to go through and check the whole article.

Female, 30–40 years, Kerttu Saalasti Instituutti, Postdoctoral Researcher

In one researcher's opinion comments from a language editor during the writing process could also make the writing of an article faster. Language editing would also allow the researcher to concentrate on the scientific work.

Certainly it would be faster, because then you wouldn't need to think yourself of every single detail that if this is correct or not. And on the other hand, when you get comments from reviewers, you don't need to think about that they are going to say something about the language. And you can better concentrate to the scientific thing than to the language.

Female, 40–50 years, Faculty of Science, Senior Researcher

Many researchers mentioned that they cooperate with their colleagues during the writing process. Most of the informants said that coauthors give them feedback. One researcher pointed out that coauthors may suggest something, but they do not give actual feedback. One researcher, however, told that feedback from coauthors is very useful.

I think that kind of works within the workgroups, because nobody nowadays is writing any papers alone, but there are several people that are involved in the same project and manuscripts are distributed between people and they give comments and write for some parts here and there. So, the feedback kind of goes and comes during the process, between the group members. But not from the editors at that point.

Female, 40–50 years, Faculty of Science, Senior Researcher

We have several authors almost always in an article. We don't write alone. It is very seldom. So, maybe the other coauthors suggest something, but they don't usually give feedback. But they might suggest that let's put this this way, I'll put it this way and you can consider, which one is...

Male, 60–70 years, Faculty of Medical Sciences, Professor

Some of them are really putting input also on spaces where arguments are lacking. So I think motivation from coauthors to improve the paper and their feedback on the paper is most useful for my writing.

Male, 30–40 years, Faculty of Humanities, Researcher

Burgess and Lillis (in Matarese, 2013) point out that clearly defined roles are a key to successful working relationships. They give an example in which a client asked an authors' editor to work on a paper, sent her the penultimate draft and told her that a colleague may suggest changes to the text at

the level of argumentation, but would not rewrite sections of the text. The client explained that the authors' editor would probably be called upon to edit a final version in which the client had implemented his colleagues suggestions and that the authors' editor's responsibilities would be limited to sentence-level changes. Subsequently the paper was accepted for publication with minor modifications and the authors' editor asked to look at the final version before the client submitted it to the journal (p. 4).

In the example the collaboration between the client and the authors' editor was successful in large part due to the mutual recognition of the roles played by different people in shaping the form of the text. Importantly, the changes each person made to the work of the other were implicated. In this way, each person's expertise and professional role was exploited to the full (pp. 4–5).

5.4 Reasons for using editing services

Despite the fact that they had been writing for many years the researchers acknowledged that they needed help with the vocabulary, grammar, style, sentence structures and the structure and focus of the article.

I think I have the same weaknesses that most Finnish have. Lacking the articles, I think that is the main point. Of course there is the shortage of vocabulary compared to native English speakers. So making the language richer and more fluent would be of help from an editor. Otherwise I think that I am kind of able to say what I want, but that could be said in a clearer and more kind of sophisticated way with the help of an editor.

Female, 40–50 years, Faculty of Science, Senior Researcher

I have lived abroad, in the States. It helped me a lot. I also have a long experience in writing, but still I am in need of a language expert...I appreciate a lot different kind of suggestions, how to put something forward and how to highlight something and small details. And those improve the quality of the manuscript a lot.

Male, 60–70 years, Faculty of Medical Sciences, Professor

Researchers usually write their texts in English. Susan Bassnett (2014) notes that understanding what happens in self-translation is complex, since on the one hand, there are two sets of readers engaging with two versions of a text produced by just one writer, and on the other, there are factors linked to an individual writer's own creativity, which may develop as he or she moves between languages. She continues that self-translation seems to offer some writers an opportunity to rethink and then rewrite, shifting between languages, so that both texts are original, albeit in different ways (p. 163).

The interviewees said that their weaknesses in writing in English have to do with grammar and vocabulary. On the other hand, some of them mentioned that writing scientific articles has improved their English, because they have learned to use scientific vocabulary and expressions. They have also learned to correct their own mistakes.

I have probably standard kind of mistakes, which I always make. When I try to write better English, I just do the same mistakes over and over again. But that's my bad... But basically I have been raising in correcting my grammatical mistakes and the language editor helps because he or she can correct those. And on the other hand, as I said before, when we are writing with native speakers, we don't have to use a language editor.

Male, 30–40 years, Faculty of Humanities, Researcher

I think that because I have already written some articles, so I think that I know scientific vocabulary and words and expressions that I want to use in the papers. I think that is maybe a strong point. And weaknesses are probably grammar issues and some details in the language and maybe sometimes I use too much the same words.

Male, 30–40 years, Faculty of Technology, Postdoctoral Researcher

I think my basic English skills are quite okay and writing is reasonable. And strong points...maybe, I don't know if it is my weakness or...I am a kind of a discipline switcher... there are quite a lot of differences in these two disciplines, so maybe my weakness might be terminology. How to use, or to sometimes use same words, but they have different interpretations in different disciplines. You must be really careful that you use the right terms, that suit right in this discipline. So maybe that is a bit difficult for me. That means that I have to read a lot from this discipline to learn the way they use language.

Female, 30–40 years, Kerttu Saalasti Instituutti, Postdoctoral Researcher

There is in some sense a lack of vocabulary, but trust me, I am much better writer than I am a talker. It is easier to remember the words when writing. Strong points, I don't know, maybe that once I get going I can produce a lot of text. I wouldn't brag with my knowledge about English or English literature or types of writing or things like that. I know people who know their English, and compared to them, well, I manage, but I don't know that much.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Research Assistant

One researcher mentioned that because she has changed discipline, she has to read a lot to learn how language is used in her new discipline. Also many authors encourage scientists to read literature. Zinsser (2006) writes that every scientific discipline has fine literature of its own.

Read the scientists who wrote well in the fields that interest you...And use them as models to your own writing. Imitate their linear style, their avoidance of technical jargon, their constant relating of an arcane process to something any reader can visualize (p. 158).

Also Glasman-Deal (2010) advises researchers to carefully examine good examples of the kind of writing he or she would like to produce, identify and master the structure, grammar and vocabulary he or she sees in these writing and then apply them to one's own writing (p. vii). For example tense changes are always meaningful, and they always signal the change in the function of the information (p. 7).

5.5 Ways to improve feedback and writing

Researchers have different subject areas, aims and writing styles. In some subject areas a researcher may need to concentrate on telling a story, whereas other researchers deal mainly with the problem of how to present the material, the method and the results of the study understandably. A beginner may need more cooperation with a language editor than someone who has written scientific articles for many years. Some researchers may have acquired a habit of writing in a certain way, but they would like to develop their style.

The informants who were interviewed in this study were almost all experienced writers of scientific articles. Only one was less experienced. The researchers valued different kinds of feedback at different stages of the writing process. All the experienced writers told that they do not need cooperation with the language editor at the very beginning of writing. At the beginning of the writing process most of the researchers wanted to think about what they wanted to write and how to present their scientific questions, methods and results. The researchers said, however, that feedback at the early stages of the writing process could help them to find the right terminology and to avoid mistakes they would need to correct afterwards.

Like in any process it is always better to get comments as early as possible. To get on the right track instead of revising the whole text at once.

Female, 30–40 years, Kerttu Saalasti Instituutti, Postdoctoral Researcher

The researchers also mentioned that someone with less experience might need help also at the beginning of the writing process. The only less experienced writer who was interviewed in this study considered that cooperation with a language editor at the beginning of the writing process could be useful.

It depends on the forum you are aiming for, and in that sense the editor could help...It is always good to have opinions and look at the subject or the goal from another point of view.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Research Assistant

According to one researcher, it is most useful to get feedback with explanations. An editor who checks the grammar should also explain why he or she changed some word or sentence structure.

It helps. You learn a lot if you are reading through those comments. And sometimes they questionmark some sentences or parts of the text, whether they are not sure if they understand it correctly or whether I should do some changes. Then it is up to me, have I really meant it the way I have written it down.

Female, 30–40 years, Kerttu Saalasti Instituutti, Postdoctoral Researcher

Every time I've got the manuscript back, there have been some fruitful suggestions and changes about how to express myself better. Of course there is this language thing. We say things differently, the sentence structure is so much different in Finnish, or some idioms we use. You can't just translate them right on, directly in English. So many times the editor has been useful for those things. So I think yes, the text has become more clear after the editing process.

Female, 30–40 years, Kerttu Saalasti Instituutti, Postdoctoral Researcher

One researcher suggested that a researcher and an editor could chat online. Some researchers said that in some cases they would like to talk with an editor during the writing process.

These few experiences I have had have been online. And the discussion was based on e-mail, so it was not a voice chat or text chat.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Research Assistant

Actually in some cases I would like to ask someone that what do you think of this. Of course we can send e-mail. In some cases it is fine. Maybe not always, but in some cases.

Male, 30–40 years, Faculty of Technology, Postdoctoral Researcher

If there is some particular, hard to explain thing in the article, it would be easy to talk face to face and explain what I meant saying this and that. But in many occasions I think that communicating by e-mail is almost as good.

Female, 40–50 years, Faculty of Science, Senior Researcher

One researcher said that language editing saves his time. He pointed out that also editing companies can save time by taking notes of the mistakes that an author usually makes and adding them to his or her account.

I think that the language editor can anyway correct the small mistakes, so I don't have to learn to write better English, in terms of the perfect language. But actually for the benefit of the Hansel agreement, they had sent a questionnaire and they scanned my previous papers and looked at the mistakes that I had made and they somehow added that to my account. I think they have some kind of control of what kind of mistakes this guy usually makes... I think it is good that they try to... but then of course that is from the point of view of their own performance and the time they spend correcting the papers, because if they know the types of mistakes, they can be faster and save money in that process.

Male, 30–40 years, Faculty of Humanities, Researcher

Comments on structure may make a scientific article “a better story from beginning to end” as one researcher said in an interview. According to another researcher the feedback on the structure of the text is very useful.

Sometimes they have suggestions, but usually they don't comment the basic structure. But sometimes they might have some good ideas. Kind of your way of presenting something becomes a better story from beginning to end. But this demands a lot from the expert and also from communication. You are not able to do that unless you have good contact and the person is familiar with your field.

Male, 60–70 years, Faculty of Medical Sciences, Professor

It takes surprisingly much of the time to get the text, like to a right structure. It is not so much about the details of the writing, but that everything will be presented clearly and in right order. And of course if you have some information about the research itself, it is important feedback, but for that you need to have experience of that research area.

Male, 30–40 years, Faculty of Technology, Postdoctoral Researcher

One researcher had noticed that the editors she has had contact with are capable of giving advice in structuring an article.

I have actually noticed about the structure thing that they do have some ideas about also structuring the article. So that makes me think that these editors I have had contact with have quite good experience in academic writing. I am not sure which discipline, but academic writing in general.

Female, 30–40 years, Kerttu Saalasti Instituutti, Postdoctoral Researcher

One researcher, in turn, thought that the language editor should have written many scientific papers in order to be able to advise him about the structure and focus.

...if the language editor would be to help me with the structure and focus, I think he or she would need expertise of writing tens of scientific papers in addition to language editing skills.

Male, 30–40 years, Faculty of Humanities, Researcher

Some researchers thought that an editor can help a researcher to concentrate on the right things in a text.

If the editor is an expert, maybe to say that you can say some things first, then the next things. But usually we try to think about those by ourself in our research group. It would be at least to have some, if he has some comment and about the focus. Like keep the focus in right things in the text. Sometimes it is little bit strange if you have it in your mind in Finnish and then translate it into English, so it little bit changes what you want to say.

Male, 30–40 years, Faculty of Technology, Postdoctoral Researcher

The editor has helped me to kind of a get rid of any extra words and be specific about terms. I don't know if it is just me or the Finnish language, I don't know, but... I revolve around things and the editor has helped me to get rid of that kind of extra stuff, extra words, extra sentences and say it in more dense nature. Even if it is a scientific text, I still manage to have that extra stuff. But I am getting better all the time.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Research Assistant

One researcher mentioned that the influence of the Finnish language is a possible reason for his problems in writing in English. Joy Burrough-Boenisch and Valerie Matarese (in Matarese, 2013) note that mother-tongue interference shows up mainly in un-English syntax and idioms and false cognates (p. 180). According to Rod Ellis (1985) the learner's first language (L1) is an important determinant of second language acquisition (SLA). A learner can use it to compensate the lack of knowledge in the second language (L2). "The L1 is a resource of knowledge which learners use both consciously and subconsciously to help them sift the L2 data in the input and to perform as best as they can in the L2". As the learner's proficiency grows, the influence of L1 will become less powerful (p. 40).

Editing at the end of the writing process was appreciated. One researcher answered that he thinks that he achieves his goals quite well when he writes scientific articles in English.

...the editor helps at the final part, like making the language more fluent and all the grammar issues. Helps with all the details that this left. But it is still very good help, because even when we think that it is ready, the language, it is pretty good because there are so many details in English language that we just can't know all of them. So it is very good to have this, so it will be good English.

Male, 30–40 years, Faculty of Technology, Postdoctoral Researcher

Some researchers mentioned that they would like to get feedback also about tables and graphics.

It is important to be able to show simply the main topic or the main result that the reader should get from the tables or the graphics... The figures and tables are connected with the text. And if the language editor is able to read the text, he or she should also be able to take a look of the tables and figures and see if they are in line with the text.

Female, 40–50 years, Faculty of Science, Senior Researcher

A lot of computer design is communicated through diagrams. Comments on the diagrams and the readability of the diagrams, usually people actually ask that what do you think of this and can you give me comments about this. Especially when there is some freedom for interpretation.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Research Assistant

One researcher pointed out that there should be a change in the way of working with an editor during the writing process. This would, in his opinion, require spending more time discussing the text.

That would involve more discussion, kind of a way of working with an editor. I sincerely doubt that people have time for that. But then again, it is a service that you buy, in the end. So, I don't know. But the issue is that I would like to get feedback most definitely.

Male, 30–40 years, Faculty of Information technology and Electronical Engineering, Research Assistant

For now, I have only used university provided service. But to me it felt like more or less proofreading as compared to another professional project, where it wasn't a purchased service, but more or less a friend of mine. And we had like more or less discussion about the content and choice of words and structure in professional sense. Compared to that experience the university provided editing services was more or less proofreading.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Research Assistant

It would seem that the professional role of language editors should develop in the same way as Tina Young (in Aaltonen, Siponkoski & Abdullah, 2015) estimates to be possible for translators. Young says that if the profession of translators will develop in such a way that translators are seen as professionals in the production of texts and in communication in general, they are able to take more responsibility in the process of producing texts. This will, however, require a much closer cooperation between the writer of the original text and the translator than it is common today (p. 164).

5.6 Possible ways to arrange editing services

The informants would like to work with the same editor for a long period of time, because this way the editor would get some knowledge of their research area and learn their way of writing. They would also like to be able to contact the language editor during the writing process. As a solution to this, one researcher suggested that there could be a service package for the article. Another researcher said that an in-house editor could be a good choice. Because finding a good editor is not easy, as it came out in the interviews, there should be flexibility in choosing a language editor. As one researcher commented, the cooperation succeeds if the researcher and the editor are on the same page.

Of course it would be nice to have some someone, like real person or person that we could contact throughout the process, if there are any wonderings. So maybe that service could be not just hiring them to just check the grammar at the end, but maybe there could be a service package for the whole article.

Female, 30–40 years, Kerttu Saalasti Instituutti, Postdoctoral Researcher

I think there should be flexibility to choose who to use as the language editor. So flexibility is the key.

Male, 30–40 years, Faculty of Humanities, Researcher

There would be some kind of a talk between the writer and the editor. That you just don't submit the paper and receive comments. I would imagine that to be nice, but then again, much time is related to forming this relationship, or trust relationship. I have to feel that I am on the same page with the editor.

Male, 30–40 years, Faculty of Information Technology and Electronical Engineering, Research Assistant

Some experienced writers estimated that sending the final version of the article is enough for them.

In my case it works like it is now. I have pretty much like the final version of the article. It has been read and given comments by our colleagues so many times that the language is ready, but I have now about seven years experience writing these articles.

Male, 30–40 years, Faculty of Technology, Postdoctoral Researcher

Some researchers reported that they have had difficulties in finding information about editing services. Some researchers, in turn, had received advertisements from editing companies regularly. They recommended that editors who live in Finland should market their services.

There are many commercial services that advertise themselves. I think basically every day I get an e-mail or two from scientific editing companies that come from abroad. I think I have never seen any editing services advertising themselves that are Finnish services. So, marketing at least would be advisable. Basically we just search for name list or something when we need one.

Female, 40–50 years, Faculty of Science, Senior Researcher

6 IMPLICATIONS

This research indicates that the researchers at the University of Oulu would like to increase cooperation with language editors during the writing process. Many researchers find writing scientific articles as the hardest part of research. Despite this, there has not been enough discussion on providing editing services for the researchers who are writing scientific articles in English at the University of Oulu. The way of arranging services at the University of Oulu is built on proofreading scientific texts. As the researchers explain, they usually send their article to proofreading at the end of the writing process before submitting it to a journal. This means that the editing services focus on correcting superficial errors in spelling, grammar, syntax, punctuation and formatting. Editing, in turn, focuses on making an article better organized and suitable for its audience. It can occur many times during the writing process. It also includes proofreading.

It is noteworthy that, as one interviewee suggested in this study, the editing services could be considered as a package for the whole article. This way a researcher could contact the editing services at different stages of the writing process. In order to give relevant feedback at appropriate stages of the writing process the needs of the researchers should be investigated and, based to this, the ways of arranging editing services should be evaluated. In arranging editing services it should be taken into account that different disciplines have their own conventions, writing styles, and ways to build an article. There are also differences in the researchers' language skills, aims and writing habits. For some writers proofreading at the end of the writing process may not be enough. Instead, they could benefit from discussion and feedback.

The material for this study was gathered by a questionnaire and interviews. In both of them the researchers pointed out that feedback at the beginning, middle and end of the writing process would improve the language, style, focus and structure of their text. The researchers reported that they would like to be able to contact a person who edits their texts when they have something to ask about writing an article. Some researchers mentioned that discussing the structure and focus of an article makes writing easier and faster. Getting comments about the language during the writing process makes it possible for a researcher to concentrate on the scientific work. It also makes it easier for the text to pass the peer review.

One researcher pointed out that certified language editors concentrate on language editing and do not make suggestions for improving the text. Another researcher said that language editors should market their services. Some researchers considered it difficult to find language editors who would be familiar with the terminology of their research area. Because of this, language editors should make clear what kind of services they are able to offer in writing scientific articles. Editing is needed in scientific writing especially when texts are written by non-native speakers of English. The findings of this study suggest that the role of an editor who edits non-native English speaking researchers' texts should be more like that of an authors' editor, who works with (and often for) the author, editing substantively to achieve a text that is fit for purpose (cf. Matarese, 2013, p. 152–153).

There is also a need for discussion about the flexibility of the editing services. Many researchers mentioned that tendering out the editing services had narrowed their possibilities to find a good language editor. The researchers reported that the editing services they had used before the competitive tendering were more thorough than the services they were provided after the competitive tendering. The researchers and editors had been able to have more discussion on the language, structure, style and argumentation of the article. The researchers said in the interviews that they wanted to choose their own editors. They thought that continuous cooperation with one person made it easier to develop their argumentation, because the editor had become familiar with their research area and the way they write.

Because scientific articles are considered as a way of measuring researchers' scientific achievements, the ways to provide feedback for the researchers needs to be taken under scrutiny. This research suggests that researchers can achieve better results when they cooperate with language editors during the writing process. This study also shows that the researchers at the University of Oulu appreciate the feedback given by their colleagues, coauthors and supervisors. This feedback deals usually with the content, structure, focus and argumentation of the article. The role of the editors and the needs of the researchers need to be investigated in order to make editing and writing scientific articles as efficient and as comprehensive as possible. In order to support the argumentation and the authoritative voice of the researchers the roles of different people, i.e. colleagues, coauthors and supervisors, involved in the writing process need to be taken into account. This way the Finnish-speaking researchers at the University of Oulu can find more ways to express the meaning they intend in their scientific articles in English. When an editor is involved in the writing process, he or she knows more about the content of the study and, as a result, there is a better chance to develop the authoritative voice of the researcher.

7 CONCLUSION

There was no previous study of the cooperation between the researcher and the language editor during the writing process of scientific articles before this research. This study revealed that researchers at the University of Oulu would like to cooperate with language editors during the writing process. The material for this study was gathered through questionnaire and interviews. More than a half of the informants reported in the questionnaire that they would benefit from more cooperation with a language editor (table 2). Furthermore, the researchers interviewed in this study said that cooperation with a language editor during the writing process would improve the language, structure, focus and style of their texts. Many researchers were accustomed to contact a language editor at the end of the writing process. This means that they polished their article as far as possible and then sent it to proofreading.

The researchers said that they would like to get feedback during the writing process, because the feedback makes it easier to make decisions, for example, in formulating sentences and choosing terms. The researchers reported that they did not, however, necessarily need to get feedback at the beginning of the writing process. The researchers reported that at the beginning of the writing process they preferred to formulate their own thoughts and put them on paper. However, when the outline for the article was ready at the beginning of the writing process, the researchers said that a language editor could help not only with the language, but also with the structure of the article. The researchers said that at the end of the writing process they trust their work to the hands of a language expert. The researchers reported that they would like to get feedback also after the writing process. The researchers also said that they would like to get comments on the readability of the graphics, because in scientific articles graphics are a part of the work.

What is more, the researchers mentioned that after tendering out the editing services in 2014, they had had to change language editors. The researchers said in the questionnaire and in the interviews that tendering out the editing services narrowed their possibilities to find a good language editor. Before the competitive tendering the researchers had been able to choose their own editors. The researchers would have liked to continue working with the editors they had chosen, because cooperation with them had produced good results.

This research suggests that when thinking about cooperation and feedback in scientific writing, it must be taken into account that writers of scientific articles have different needs. The cooperation

between the researcher and the language editor should be based on the researcher's research area, language skills, aims and writing habits. Researchers in some research areas may need more suggestions than others for presenting their ideas. For some experienced writers it may be enough that the articles are sent to proofreading.

This study shows that the researchers would like to get ideas for presenting the content of their study. It seems likely that language editors could help researchers to find ways to better structure and present the content of their articles. This requires cooperation between editors and researchers during the writing process. One researcher said in an interview that discussing with an editor during the writing process of a scientific article takes time. However, as Töyry et al. (2008) point out, cooperating with an editor during the writing process makes it easy to give and receive feedback after the work is done (p. 116). This means that the time that has been used in cooperation during the writing process can make proofreading easier.

It would have been easier to discuss the subject of this thesis in the light of previous research. There is, however, a substantial amount of information of editing and teaching writing. It can be studied further in order to investigate feedback and cooperation in writing scientific articles in English. In this study it would have been useful to get more information about the ways in which the researchers would benefit from more cooperation with a language editor.

This study can be considered both reliable and valid. The questions have been answered by researchers, who are the best sources of information when it comes to their own writing process, the process of scientific writing is similar in different contexts, and the questions would produce the same results if applied to the same population (cf. Guest et al, 2012, pp. 81–82).

Cooperation between researchers and language editors in writing scientific articles deserves to be studied further. Further research is needed to find out what kind of feedback and cooperation researchers in different fields of study and at different stages of career need for their writing in English. It would also be useful to study in which stages of the writing process researchers need feedback and cooperation. Furthermore, the ways of arranging editing services should be evaluated.

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Questionnaire and interviews

The answers to the questionnaire and the interviews are in the possession of the author of this thesis.

APPENDIX 1. Questionnaire

Hello!

Are you interested in finding out more about writing scientific articles in English?

My name is Heli Ronkainen. I am writing a master's thesis in English Philology at the University of Oulu. In my thesis I try to find out how Finnish-speaking researchers deal with publishing in English and how they cooperate with language editors. The aim of the thesis is to find ways to make the writing process more efficient and comprehensive. I would kindly ask you to answer my questions, so that I can get a good picture about how professionals view their writing process.

I hope that this sounds interesting enough and you will fill in my questionnaire. It will take only about 5 minutes to answer the questions. The results will be kept anonymous.

Thank you for your time! Also remember to fill in your name and e-mail after answering the questions. Please also mention if you are available for a short interview about this subject.

Questions

Background information

Gender

Age

How many years have you been publishing in English?

(Open question)

What is your field of research?

(Open question)

When do you cooperate with a language editor now?

(Open question)

Do you think that you could benefit from more cooperation with a language editor?

Yes

No

I do not know

Would you like to go through the writing task with a language editor before beginning to write?

Yes

No

I do not know

Do you think that a close definition of the writing task, i.e. the content, structure, focus and style of an article, would help you to write and to communicate with a language editor?

Yes

No

I do not know

Does your language editor offer you enough advice?

Yes

No

I do not know

When would you need interaction with the language editor during the writing process? You can select more than one option.

At the beginning (planning)

During writing (focus, content, structure, feedback)

At the end of the process (editing, language)

After the process (feedback)

In which aspects of writing do you think that you could benefit from more cooperation with a language editor? You can select more than one aspect.

Content

Structure

Focus

Style

Language

Something else, what?

(Open question)

How successfully do you think that you achieve your aims when you write about your research in English?

Excellently

Well

Satisfactorily

Would you like a language editor to give you feedback to improve your level of written English for future publications?

Yes

No

I do not know

Can you please fill in your name and e-mail

(Open question)

Are you available for a short interview about this subject?

Yes

No

If you are, can you please write your phone number.

(Open question)

If you have something more to say about this subject, please write it here.

(Open question)

Thank you for your time!

If you have something to ask about the questions, please send me an e-mail.

APPENDIX 2. Interview questions

- What kind of editing services have you used? What are your experiences using them?
- Is it easy to find a good language editor?
- What do you expect from an editor? What kind of skills should he or she have?
- Is it important for an editor to be familiar with your area of research? Why? Have you found editors who know your area of research?
- Do you ever meet or communicate with your language editor personally?
- How do you pay for language editing? Is funding an issue?
- In what way you would like editing to be arranged for writers of scientific articles?
- Do you think that writing could be faster with the help of a language editor? Why or why not?
- How well do you achieve your goals when you write about your research in English? How much does the language editor help?
- What are your strong points and weaknesses in writing in English? And how does the language editor work on these?
- Do you think that discussing with a language editor at the beginning of the writing process could help you to innovate ways to present your topic? How? / Why not?
- Do you think a language editor could help you with the structure and focus of your article? How? / Why not?
- What kind of feedback do you find most useful for your writing?
- Would you like to get feedback during the writing process?