Collaborative writing at Bobcatsss. Two heads are better than one?

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The **purpose** of this paper is to discuss learning experiences, mutual benefits and possible drawbacks from collaborative writing and presentation of scientific papers at Bobcatsss international library conferences.

Methodology/design/approach

A web based questionnaire was sent to participants who co-authored and presented papers at the Bobcatsss 2012 conference. The results are measured against the viewpoints and experiences of five Norwegian students, who have collaborated with the author of this paper, at four Bobcatsss conferences, in 2006, 2009, 2010 and 2012.

Findings

Responses from the survey and the student interviews indicate that collaborative writing is a superior strategy for learning LIS subjects. None of the interviewees and few of the respondents had attended a writing course to improve their writing skills. Many had not read literature of the type: "How to write a scientific paper".

Practical implications

The study may be useful for future LIS students who arrange Bobcatsss conferences and for those who plan to write and present a scientific paper. Contributors could benefit from a study that highlights the theoretical, didactic and practical problems in the field of collaborative writing.

Originality/value

While the data is exclusively from Bobcatsss, the findings may be more widely relevant. There are few studies on Bobcatsss, except for the annual reports. This paper intends to explore the educational rewards, the complexity and difficulties of collaborative writing.

Type of paper

Case study

Keywords Bobcatsss, Collaborative writing, Coauthoring, Group writing

Introduction

Bobcatsss is an international conference series organized annually by library and information science (LIS) students from universities in Eastern or Central Europe together with students from Western Europe. It takes place under the auspices of EUCLID (European Association for Library and Information Education and Research) and deals with current themes from the LIS field.

At the 2012 conference in Amsterdam, Bobcatsss celebrated its 20th anniversary, drawing more than 400 participants from all over the world and a record number of 80 papers, including five keynote speeches (Riekert and Simon, 2012). These library conferences are documented through annual reports (e.g. Thiele and Moyer, 2012). In his keynote speech Jelke Nijboer recorded the genesis and history of Bobcatsss (Nijboer, 2012). One important aspect has been the organizing students' *learning* experiences within such fields as public relations, writing and paper handling, logistics and economy. The organization of the conference is integrated in the students' educational programs (Audunson, 2005). In short, by participating in Bobcatsss conferences LIS students can learn about:

- writing and presenting a scientific paper (alone or together with other students or a professor)
- organizing scientific conferences (develop themes and programs, evaluate and select items, prepare workshops and posters, publish the lectures, as well as designing the conference's web pages)
- building professional and personal networks in a multicultural context

The focus of the current study falls under the first point of this summary: collaborative writing of a paper. More specifically, the investigation raises the questions: What is the impact on students' writing and their involvement in library and information science subjects? How is the collaborative writing organized? What are the divisions of labor and the means of communication? What are the prospects for publishing the papers in scholarly, peer-reviewed journals? Special attention is given to collaborative writing between professors and students as an educational strategy.

After a tentative definition of collaborative writing, the article gives a short overview of previous research, with an emphasis on educational benefits. It is followed by an outline of the methodological approach. The results from the survey summarize the key findings. The discussion and conclusion reflect on the literature, the survey and the student interviews. Two appendices show the growth of collaborative writing at Bobcatsss in the period 1993- 2012, statistics on collaborative writing at the Bobcatsss 2012 conference and the survey questions.

Defining collaborative writing

In its simplest form, collaborative writing may be defined as single texts created by multiple authors, as expressed through the title of Ede and Lunsford's book on the subject (1992). It refers to projects where several persons – who may have different tasks – together contribute to a single text, in contrast to texts written individually (Eritsland, 2008, p. 10). Contributions may not be restricted to the actual writing process. A wider definition would include any activity such as "brain-storming, outlining, note-taking, organizational planning, drafting, revising, and editing" (Ede and Lunsford, 1992, p. 14). Accordingly, collaborative writing could be "any piece of writing, published or unpublished, ascribed or anonymous, to which more than one person has contributed, whether or not they grasped a pen, tapped a keyboard, or shuffled a mouse" (Rimmershaw, 1992, p. 16). Articles in Wikipedia may well fit into this broad definition. For scientific literature, however, this may be problematic and controversial. The responsibility for and ownership of an academic text is most commonly assigned to the main contributors, as expressed through byline and copyright, with limited accountability for the less important cooperating partners (Dysthe, Hertzberg and Hoel, 2010, p. 197; Solomon, 2009; Zutshi, McDonald and Kalejs, 2012). As definitions may be ambiguous, Lowry, Curtis and Lowry (2004) attempted to define key concepts of collaborative writing and to work out a consistent terminology. The purpose was to improve interdisciplinary research and to produce technologies that better support the co-authoring of papers.

Previous research on collaborative writing

Klobcar and Juznic used bibliometrical and bibliographical methods to analyze four Bobcatsss proceedings in the period 1998-2001(2002). Even though not addressing collaborative writing directly, one of their findings is the growth of co-authored papers, from 40% in 1998 to 51% in 2001 (Appendix I, Tab. 1).

The basic study on collaborative writing was performed by Ede and Lunsford at the end of the 1980s. During a six year period they investigated collaborative writing in seven professional organizations (1992). The study showed that collaborative writing was not limited to a few genres, but were used in all types of documents (Ede and Lunsford, 1992, p. 63).

Writing in the post-modernist tradition of the nineteen eighties, Ede and Lunsford challenge, not only the traditional concept of authorship, but also "the myth" that writing is a solitary act (1992, p. 73). The findings of Ede and Lunsford have been confirmed by more recent studies, showing that collaborative writing is pervasive in the contemporary corporate workplace (Colen and Petelin, 2004).

Ede and Lunsford (1992), Dysthe (2003) and Eritsland (2008, 2009) adopt a socio-cultural, constructivist perspective on collaborative writing. Constructivism, as a theoretical perspective to education and learning, suggests that meaning is *constructed* through dialogue

and linguistic interaction (as opposed to behaviorist ideas). These ideas originate from the theories of the neo-kantian philosopher and literary critic, Mikhail Bakhtin and the psychologist Lev Vygotskij and their followers (Dysthe, 2003, p. 39). Bakhtin's key concepts are dialogue, heteroglossy and polyphony. When we write, we never start with "clean sheets" but enter an ongoing dialogue. "The word" does not belong to me alone, but is a meeting place for meanings, for voices and for the dialogic relations between them (Bakhtin, 2003, p. 70). All utterances occur against a "background of other ... utterances on the same theme, a background made up of contradictory opinions, points of view, and value judgments" (Bakhtin, 1981, p. 281)

The process of collaborative writing may be perceived as a polyphonic dialogue, involving different voices which supplement, challenge and confront each other. The dialogic element lies in the tension between the voices (Dysthe, 2003, p. 51). Tension and conflicts within a writing group may be interpreted positively, as it can strengthen the involvement, produce better ideas and result in a more complete, reliable and understandable text. The aim is not consensus, but expansion of meaning, insight and understanding. Multiple authors contribute with their experiences, specialist knowledge and writing competence. Dialogic theories of knowledge and constructivism in learning theory are linked to the philosophical tradition of Immanuel Kant (Dysthe, 2003, p. 39).

Pedagogical benefits of co-authoring texts

In his book on collaborative writing in Norwegian secondary school, Alf G. Eritsland notes several educational advantages. By working together (simultaneously) on a text, young people can improve their writing skills by getting trained in reading texts critically and by getting responses to what they themselves have written. They learn to think professionally by *writing themselves into* the profession. It is motivating for active learning because they can see the text from the inside and discuss linguistic phenomena with others (Eritsland, 2008, 2009). Developing a text through cooperation is something many school children and students will experience later in their professional careers (Aamli, 2008).

Collaborative writing between professors and students

Burks and Chumchal (2009) point out that collaborative writing between professors and students may be an important educational strategy for several reasons. It is an opportunity for direct involvement in the students' writing process, through monitoring, counseling and discussing ethical questions. It helps recruiting future students to the faculty and it introduces the students to the world of science through getting practice on the basic steps of the research process, which may be summarized as: "identify a question, explore the literature and develop methods (...) analyze the results, synthesize the conclusions, and place the research in the larger context required for publication" (p. 2). Students may acquire these research skills independently but they will get valuable feedback when working directly with their

professors. Although Burks and Chumchal teach within the field of biology, these steps are required by most scientific journals. They further investigate the issues of authorship (assignment, credit and order) and elaborate on strategies for the writing process, giving practical advice on how and why to do it (p. 5). One of the most rewarding aspects of coauthoring with students is seeing collaborative projects turn into publishable papers in scholarly journals (Payne and Monk-Turner, 2005).

Methodology

A web based questionnaire was sent through e-mail to collaborating participants at the Bobcatsss 2012 conference at the end of May 2012. The questionnaire combined a set of open-ended questions with a structured format. The pre-structured questions were intentionally kept simple and the number as low as possible hoping to get more answers. Open ended questions are more demanding and generally give fewer responses. The open questions concerned possible advantages and drawbacks of collaborative writing, especially the impact on students' practice in writing and on their involvement in LIS subjects. Questions with fixed alternatives concerned levels (1-5 scale) of satisfaction and practical matters, i.e. how the co-authoring was organized, the divisions of labor, the means of communication, and the prospects for publishing the paper in scholarly peer-reviewed journals. For specifics on survey questions, see Appendix II. The results are measured against the viewpoints and experiences of five Norwegian students, who collaborated with the author of this paper, at four Bobcatsss conferences, in the period 2006-2012. The students were interviewed in early May 2012.

Results from the survey

The survey was sent to 81 collaborative writers at the Bobcatsss 2012 conference. About 40% (31participants) responded (anonymously) to the questionnaire. While 50% respondents are generally regarded as an acceptable response rate (Jacobsen, 2005, p. 300), 40% is not uncommon for surveys posted through e-mail (Instrumental Assessment Resources, 2011). A higher response rate would have been more representative for the pre-structured questions. In this respect the study only claims to be indicative. Some respondents may reflect the views of the writing group as a whole, making the survey more accurate. However, there is no evidence in the survey data to support this assertion. As for the open-ended questions, most of the opinions expressed in the survey seem to match the viewpoints both in the student interviews and in the literature on collaborative writing.

The responses in the survey had the following geographical distribution: Bulgaria (1), Croatia (4), Germany (2), Hungary (1), Italy (1), Lithuania (1), Netherlands (3), Norway (1), Spain (2), Turkey (4) and the USA (11). Collaborative authors from Australia, Denmark, Finland and Romania did not respond. The occupations of the responding co-authors included

professors / teachers 32% (10), students 36% (11), librarians 13% (4), and 19% (6) for other occupations.

Not unexpectedly, as many as 38% (12) considered learning LIS subjects through *writing* as *important* while 61% (19) considered it *very important*, which add up to *all* the respondents. Compared to writing alone, more than half, 55% (17) considered collaborative writing *more* or *much more* important to learning LIS subjects, while 45% (14) thought it *equally* important.

Interestingly, only 16% (5) of the respondents had attended a writing course to improve their writing skills. While books on "How to write a scientific paper" are easily available in most academic libraries, as many as 29% (9) answered that they had not read this type of literature, while 71% (22) answered yes to that question.

Concerning levels of satisfaction (questions no. 13-18), a large majority were satisfied with the paper and the presentation, the writing process, collaboration between group members and their participation in the project, with answers ranging from 77% (23) to 93 % (29).

Microsoft products (58%, 18) and Google Docs (23%, 7) were the most widely used software when co-authoring the papers, but a few respondents also used Dropbox or Prezi, in combination with Microsoft Word. E-mail (81%, 25) was by far the dominant tool for keeping in contact with the other group members, in combination with meeting in person, for those who had the opportunity. Other means of communication were phone calls, Skype and Facebook, in combination with e-mail.

The roles of the participants in the writing groups were distributed between the alternatives:

- 29% (9) Each person works independently on a specific section of the document and at the end all sections are joined together
- 32% (10) Each person works on the whole document
- 39% (12) One person writes the whole document and the others have different roles

When asked if one person was in charge of the project, 57% (17) gave no as an answer.

The order of authorship was assigned evenly among the alternatives, alphabetical order, 42% (13) and according to the size of contribution, 42% (13). Three professors wanted to place the students first because it was their ideas and they who drove the whole process. One respondent stated: "First is the teacher and then the other co-authors". It is not clear from the survey data if publication plans affected the author order.

Responding to the prospects for publishing the paper in scholarly, peer-reviewed journal 27% (8) considered it likely, 30% (9) considered it very likely, while 30% (9) thought it neither likely nor unlikely and 13% (4) thought it unlikely.

The student interviews

The viewpoints of the five Norwegian students matched the findings in the survey on all important aspects, although in other wordings. The questions were basically the same, yet the interviews allowed for more details in questions and responses. All the students agreed that writing a paper with their professor was a valuable learning experience and an important educational strategy for learning LIS subjects, more so than writing alone.

A brief statement of the main benefits, in the students' own words, could be the following (our translation): Collaborative writers have to defend their arguments, explain and discuss their ideas. The more you share, the more you learn. It is both motivating and involves responsibilities to your co-authors. You have to adapt to others as in working life. Each contributor covers different aspect, so you see the topic from different angles. The cooperating professor had experience and could give useful advice both to writing process and to the presentation of the paper.

As in the responses from the survey, the interviewees were satisfied with the final paper and the presentation. The preferred communication form was face to face meetings together with e-mails and attachments. Dropbox was mainly used as a depository of articles and to track different versions of the text.

Surprisingly, none of the student interviewees had attended a writing course, and only two of them had read books on how to write a scientific paper. They did not consider it difficult to write in English but often wrote the text first in Norwegian and then translated it into English.

One paper had been written by the professor, with the student contributing about ten percent. Another paper was mostly written by the student, as it was based on her bachelor thesis. For the other papers, the workload was equally shared, as both the students and the professor worked on their separate parts, which were joined together at the end. Those variations correspond to the survey results. To promote the students, they were placed first in the assignment of authorship. Both students and the professor were satisfied with the final product. Two of the papers have been updated, peer-reviewed, and published in a scholarly journal.

For the Norwegian students the learning outcomes at the Bobcatsss conferences had been a mixed experience. Three students thought the lectures they attended (at Amsterdam and Porto) were poor and of little interest. The other two students (at Zadar and Parma) thought the lectures were both interesting and rewarding, especially the workshops. All five attended the conferences because they were invited by their professor. The conference venues had been attractive. They were curious about Bobcatsss and saw it as a useful supplement to the LIS education in Norway. Not least, they were interested in building contacts with library students in other countries and experienced the social arrangements as great.

On the advantages of writing alone one student stated (our translation): I am not very happy writing with others. To write alone is an exercise in independence. You don't have to compromise and the result is more succinct and homogeneous. You work faster, and you don't have to send the drafts back and forth... The conflicts are gone, you can focus on your theme, and you have more control of time and place and the writing process.

According to the collaborative writers, both the students and the survey respondents, the main **benefits** of collaborative writing may be briefly summarized as:

- Sharing ideas, knowledge, viewpoints and perspectives. The result is greater depth and breadth and a more comprehensive and better paper.
- More efficient way to learn how to write a scientific paper. Co-authoring with a professor facilitates the learning process, which includes going through edits and revisions
- Complex problems can be analyzed in greater detail and lead to new findings
- Distribution of work and responsibility can make the work easier and more quickly done
- Creating networks, cultural interaction and friendship

A summary of what was experienced as **negative aspects** could be the following:

- Confrontation, disagreements and personal conflicts
- Coordination of different writing styles
- Language barriers
- Inadequate communication and misunderstandings
- Compromise and giving up control
- Time management
- Negotiating author order

A few respondents (6) could not suggest any drawbacks with collaborative writing, stating simply no to this question.

Discussion

Due to all the benefits of collaborative writing, as expressed in responses and interviews, one should perhaps expect that co-authored papers have a higher quality and/or higher impact than individually written ones? This seems difficult to assess. It has been said that quality may be easy to recognize but hard to define (Brophy and Coulling, 1996). One could argue that quality is not collective characteristic, but is based on the individual contribution. Although the majority of contributors in this study are satisfied with their papers and presentations, there are obvious differences in quality. Looking back at twenty years of Bobcatsss conferences Nijboer, made the following general statement on the topic of quality: "Like many international conferences one noticed quite a difference and a variety in the quality of papers and workshops presented at Bobcatsss. But many times we could enjoy excellent

keynotes, papers, worthwhile workshops and interesting poster presentations. One thing improved definitely: the quality of English presentations in the last decade" (Nijboer, 2012). He makes no distinction between co-authored papers and the individually written ones.

A way of measuring quality in Bobcatsss papers could perhaps be to locate the papers which are updated, improved and later published in prestigious LIS journals. A majority of 57% (17) thought it likely or very likely that their paper would be published in a peer-reviewed journal. To get accepted in the first place one has to submit an abstract. Three reviewing committees base their judgment on the following criteria: quality and significance of content, originality and relevance for the LIS field and how the proposal is presented. Out of 200 submitted abstracts at the Bobcatsss 2012 conference, 80 were picked out for presentation.

Co-authored proposals are not given priority, but students and teams of students and teachers are especially invited to the conference, which may account for the high number of this category.

Klobcar and Juznic contend that co-authorship result in publications with higher impact, than papers written individually (2002, p. 19), a claim which is not documented in their paper. Their study is based on quantitative analysis of citations (i.e. references) in the Bobcatsss papers. There is no analysis of citation impact i.e. how often Bobcatsss papers are cited in the LIS literature. Their findings show that there has been an increase in the number of references in Bobcatsss papers in the period 1998-2001. The authors indicate that this could be a sign quality (p. 22) i.e. the more references, the better the paper. Incidentally, Nijboer's readable article contains only one reference (2012). Even if citations are an indication of quality, the figures are difficult to compare with the number of references in the Bobcatsss 2012 papers, due to the strict limit of four pages for each paper. Klobcar and Juznic further note that co-authored papers have become the norm rather than the exception in scholarly publications, and that the number of multiple authorship is higher at Bobcatsss conferences than in average LIS publications, because of the cooperation between professors and students. This can be seen in Appendix I, Tab. 4.

In the first three years of Bobcatsss conferences all the papers were written individually, except for one in 1995. In 1999 the number of co-authored papers reached 50%, a figure which has been relatively stable into the next decade, with fluctuations above and below that percentage. The increase in collaborative writing is reflected in the general LIS literature. R.L. Hart (2000) and A.H. Bahr and Mickey Zemon (2000) examined co-authorship in the literature of academic librarianship, with focus on two core academic library journals, *The Journal of Academic Librarianship* and *College & Research Libraries*. In the latter, collaborative writing had risen from less than 5% in the period 1939-1944 to 59.5% to the period 1989-1994 (Hart, 2000). At the 50th anniversary of the Oslo University College, Department of Library and Information Science in 1990, all the articles (10) in the jubilee publication were written individually (Aarek, 1990). Twenty years later, at the 70th

anniversary in 2010, half of the jubilee papers (i.e. five out of ten) were written collaboratively (Audunson, 2011). In science, the increase in collaborative writing has been dramatic, reflecting a change in how science is performed. This research often demands huge material and human resources, not possible for one person or institution to undertake alone. Scientists collaborate across disciplines, institutions and countries.

At Bobcatsss conferences, however, co-authorship and international cooperation in research across borders are not common. This was observed in the study of Klobcar and Juznic. Only eight such papers were found by Klobcar and Juznic in the period 1998 to 2001 (2002, p. 19). The need for international cooperation was also stressed by Nijboer in his recommendation for future Bobcatsss conferences (2012, p. 17). This low figure is confirmed in this study. Only three papers were written collaboratively involving two countries Australia/Germany, Norway/Bangladesh and Norway/Romania at the Bobcatsss 2012 conference.

One of the most interesting findings in the present study is that so few – none of the student interviewees and only 16% of the respondents to the questionnaire had attended a writing course in order to improve their writing skills. Further, many had not read literature on how to write a scientific paper. At the library of Oslo and Akershus University College there are shelves full of books on this topic. The number of student interviewees is too low to determine if they are less likely to have attended writing courses or read this literature than the respondents in the survey. Every year the College offers a one week writing seminar including lectures on collaborative writing and writing in English (Sandtrø, 2012). Attending a writing course, or reading about it, is an opportunity to learn both the practical and theoretical aspects of writing.

Noël and Robert observed that, in spite of sophisticated collaborative writing tools, most of their respondents used individual word processors and e-mail as their main tools for writing joint documents (2004, p. 81). This observation coincides with the findings in this study. The day to day communication between the author of this paper and his students had been a constant stream of e-mails with attachments.

Arguably, writing is a solitary task as most writing is done alone, contrary to the post-modernist conceptions of Ede and Lunsford. One exception could be the synchronous co-authoring, where multiple authors work on a single document at the same time. Even though the software is now easily available, joint writing simultaneously, in close collaboration, is rare (Nöel and Robert, 2004, p. 83). It is not reported in the present study. This way of organizing the writing process could have positive learning benefits, and possibly result in stronger involvement, through instant comments, edits and responses. On the other hand, it is more time consuming. The drafts have a tendency to become messy and generate confusion and conflicts (Eritsland, 2008, p. 29). Given sufficient time, writing the paper jointly and synchronously, from start to finish, could be worthwhile as a learning experiment.

Even if students can offer fresh insights and new perspectives, both on LIS topics and the writing process, no professor mentions learning from their students as a benefit of co-

authoring. Most often professors cite teaching and mentorship, getting students involved and bringing different perspectives together as the main benefits.

What respondents cite as negative aspects of co-authoring papers, i.e. confrontations and disagreements, compromise and giving up control could in fact be viewed as positive in so far as it lead to discussions and better ideas, stimulating creativity and better understanding. Each participant contributes with experiences, knowledge and perspectives, which may challenge and supplement the others. It may be a demanding task to find good cooperating models, to distribute tasks, to handle disagreements and to suffer corrections to one's language and contents. To let the text circulate among the contributors until it is finished may be an exciting and enjoyable experience, often with aha-surprises. Writing alone or together with others, it is always an advantage to have another person to look at one's text, even though only for comments or edits. As demonstrated through the peer review system, collaboration is at the heart of academic authorship.

Future research on collaborative writing

The data from this study specifically refers to Bobcatsss, but the findings may have a wider application. Three interesting questions emerge:

- Do co-authored papers in the LIS field, especially interdisciplinary papers across national borders, have a higher citation impact than individually written ones, and could this be measured by bibliometrical and quantitative methods?
- Are there any differences in collaborative writing practices in different disciplinary areas of LIS, e.g. between those working on a more scientific/technological topic compared to those with an arts/social science perspective?
- How can the challenges of collaborative writing best be overcome? Further research into different approaches to or models of collaborative writing is needed.

Conclusion

Are two heads better than one? Responses from a majority of the respondents suggest that collaborative writing is a superior way of learning LIS subjects, more valuable than writing alone. Collaborative writing has many advantages. For those reasons we have seen an increase in this type of writing over the last decades. Bobcatsss is an important venue for presenting scientific quality papers on topical LIS subjects. More important though, is to learn *how* to do it. In this respect collaborative writing may be the best way.

References

Aamli, K. (2008), «Samskriving skal gi bedre tekster», available at: http://www.forskning.no/artikler/2008/mai/183097 (accessed 18 June 2012)

- Aarek, H.E. (Ed.), (1990), *Mer enn bøker: SBIH 50 år : jubileumsskrift*, Oslo: Statens bibliotek- og informasjonshøgskole.
- Audunson, R. (2005), "Bobcatsss manual", available at: http://www.jbi.hio.no/bibin/euclid/bobcatsss.html (accessed 12 June 2011)
- Audunson, R. (Ed), (2011), Krysspeilinger: perspektiver på bibliotek- og informasjonsvitenskap, Oslo: ABM-media.
- Bahr, A.H. and Zemon, M. (2000), "Collaborative authorship in the journal literature: perspectives for academic librarians who wish to publish", *College & Research Libraries*, Vol. 61 No. 5, pp. 410-419, available at: http://crl.acrl.org/content/61/5/410.full.pdf+html (accessed 12 June 2011)
- Bakhtin, M. (1981), *The dialogic imagination: four essays*, edited by Michael Holquist, University of Texas Press, Austin
- Bakhtin, M. (2003). *Latter og dialog: utvalgte skrifter*. Cappelen akademisk forl., Oslo. Translation of: Probemy poetiki Dostoevskogo (*Problems of Dostoyevsky's poetics*); (first time published in 1929, 2nd ed., 1963)
- Brophy, P. and Coulling, K. (1996), Quality management for information and library managers, Aslib Gower, Aldershot.
- Burks, R. L and Chumchal, M.M. (2009), "To Co-Author or Not to Co-Author: How to Write, Publish, and Negotiate Issues of authorship with Undergraduate Research Students", *Science Signaling*. Vol. 2, No 94, pp. 1-7. Doi:10.1126/scisignal.294tr3
- Colen, K. and Petelin, R. (2004), "Challenges in collaborative writing in the contemporary corporation", *Corporate Communications: An International Journal*, Vol. 9 No. 2, pp. 136-145. DOI: 10.1108/13563280410534339
- Dysthe, O. (2003). «Teoretiske perspektiv», in Dysthe, O. and Engelsen, K.S., *Mapper som pedagogisk redskap: perspektiver og erfaringer*, Oslo: Abstrakt forlag. pp. 37-60
- Dysthe, O., Hertzberg, F. and Hoel, T.L. (2010), *Skrive for å lære: skriving i høyere utdanning*. Abstrakt, Oslo
- Ede, L. and Lunsford, A. (1992), *Singular texts/plural authors: perspectives on collaborative writing*, Southern Illinois University Press, Carbondale, Ill.
- Eritsland, A. G. (2008). Samskriving: ny veg i skriveopplæringa, Samlaget, Oslo
- Eritsland, A.G. (2009), «Samskriving som tilpassa opplæring», in *Veiledning i tilpasset opplæring: arbeidsmåter fra oppskrift til refleksjon*, Fagbokforl., Bergen, pp. 109-124.
- Hart, R.L. (2000), "Co-authorship in the academic library literature: A survey of attitudes and behaviors", *The Journal of Academic Librarianship*, Vol. 26 No. 5, pp. 339-345
- Instrumental Assessment Resources (2011), Assess teaching. Response rates, The University of Texas at Austin, available at:

 http://www.utexas.edu/academic/ctl/assessment/iar/teaching/gather/method/survey-Response.php (accessed 16 August, 2012)
- Jacobsen, D.I. (2005), Hvordan gjennomføre undersøkelser? Høyskoleforl., Kristiansand
- Klobcar, M. and Juznic, P. (2002), "Bibliometrical and bibliographical analysis of BOBCATSSS proceedings (1998-2001)", in *Hum@n beings and information*

- specialists. Proceedings of the 10th international BOBCATSSS symposium on Library and Information Science, January 28-30 in Slovenia, Portorož. Faculty of Arts, Dept. of Library and Information Science, Ljubljana pp. 16-25.
- Lowry, P. B., Curtis, A. and Lowry, M. R. (2004), "Building a Taxonomy and Nomenclature of Collaborative Writing to Improve Interdisciplinary Research and Practice", *Journal of Business Communication*, Vol. 41, No. 1, pp.66-99. doi: 10.1177/0021943603259363
- Nijboer, J. (2012), "From static bookshelves to mobile communication. Two decades of Bobcatsss developments", in *Information in e-motion. Proceedings of the Bobcatsss* 2012, 20th International Conference on Information Science, 23-25 January, 2012, Amsterdam. Bad Honnef, Bock+Herchen, pp. 14-18
- Noël, S. and Robert, J.M. (2004), "Empirical Study on Collaborative Writing: What Do Coauthors Do, Use, and Like?" *Computer Supported Cooperative Work*, Vol. 13, No. 1, pp. 63-89. doi:10.1023/B:COSU.0000014876.96003.be
- Payne, B. K. and Monk-Turner, E. (Spring 2005), "Benefits of writing with students," *Academic Exchange Quarterly*, Vol. 9, No. 1, p. 282(5), available at http://rapidintellect.com/AEQweb/6jan2954l5.htm (accessed 4 December 2012)
- Riekert, W.-F.J. & Simon, I.(Eds.), (2012), *Information in e-motion?: proceedings [of the]* 20th International Conference on Information Science, Amsterdam, 23-25 January 2012, Bock + Herchen, Bad Honnef
- Rimmershaw, R. (1992), "Collaborative writing practices and writing support technologies", *Instructional science*, Vol. 21, pp. 15-28
- Sandtrø, T (2012) «Skriveuke for studenter og tilsatte», available at:

 http://www.hioa.no/eng/Om-HiOA/PUS/Mangfold-i-pedagogisk-praksis/Skriveuke-for-studenter-og-tilsatte#program (accessed 2 August 2012)
- Solomon, J. (2009) "Programmers, Professors, and Parasites: Credit and Co-Authorship in Computer Science", *Science and Engineering Ethics*, Vol. 15 No 4, pp. 467-489. DOI 10.1007/s11948-009-9119-4
- Thiele, J. and Moyer, J. (2012), "Bobcatsss conference report: Amsterdam, Netherlands", *New Library World*, Vol. 113, No. 5/6, pp.
- Zutshi, A., McDonald, G. and Kalejs, L. (2012), "Challenges in collaborative writing: addressing authorship attribution", *European Business Review*, Vol. 24 No. 1, pp.28 46

Appendix I The growth of collaborative writing at Bobcatsss

Tab 1. Bobcatsss. Number of papers 1993-2012. Single and multiple authors in figures and %

Place	Year	Single author	%	Multiple authors	%	Total
Budapest	1993	13	100	0	0	13
Budapest	1994	19	100	0	0	19
Budapest	1995	11	92	1	8	12
Budapest	1996	29	76	9	24	38
Budapest	1997	51	70	22	30	73
Budapest	1998	28	60	19	40	47
Bratislava	1999	26	50	26	50	52
Krakow	2000	17	53	15	47	32
Vilnius	2001	28	49	29	51	57
Portorož	2002	18	46	21	54	39
Torun	2003	23	48	25	52	48
Riga	2004	28	51	27	49	55
Budapest	2005	25	52	23	48	48
Tallin	2006	23	53	20	47	43
Prague	2007	37	62	23	38	60
Zadar	2008	18	51	17	49	35
Porto	2009	17	45	21	55	38
Parma	2010	22	48	24	52	46
Szombathely	2011	25	57	19	43	44
Amsterdam	2012	42	52	38	48	80

The Bobcatsss 2012 conference in Amsterdam

Tab 2. Geographical distribution and number of collaboratively written papers

Bulgaria	1
Croatia	4
Finland	1
Germany	5
Hungary	1
Italy	1
Lithuania	2
Netherlands	4
Norway	1
Spain	1
Turkey	5
USA	9

In addition three papers were written collaboratively involving two countries: Australia/Germany, Norway/Bangladesh and Norway/Romania.

Tab 3. Collaborative writers by occupation

Students	41
Professors / Teachers	24
Researchers	6
Librarians	6
Unknown	6

Tab 4. Combinations of collaborative writers and number of papers

Professors /teachers writing with students	17
Students writing with students	6
Other combinations*	15

^{* (}e.g. Librarians writing with librarians, professors writing with colleagues, etc.)

Tab 5. Number of authors per paper

2 authors	24 papers
3 authors	11 papers
4 authors	2 papers
7 authors	1 paper

Appendix II

Survey questions:

- 1. Which country do you come from?
- 2. What is your work setting?
- 3. What is your occupation?
- 4. Did you write your paper together with: (Professor / Teacher Student(s) Both Other(s)
- 5. How important do you consider writing is to learning LIS subjects?
- 6. How important do you consider collaborative writing is to learning LIS subjects, compared to writing alone?
- 7. Have you attended a writing course to improve your writing skills?
- 8. Have you read any literature of the type: "How to write a scientific paper"?
- 9. How difficult do you consider writing in English?
- 10. What were your main reasons for co-authoring a paper at the Bobcatsss 2012 conference?
- 11. Based on your experiences at Bobcatsss 2012 what are the advantages of co-authoring papers?
- 12. Based on your experiences at Bobcatsss 2012 what are the negative aspects of coauthoring papers?
- 13. How satisfied were you with the final paper?

- 14. How satisfied were you with the presentation of the paper?
- 15. How satisfied were you with the collaboration between group members?
- 16. How satisfied were you with your own participation in the project?
- 17. How satisfied were you with the participation of others?
- 18. How satisfied were you with the writing process?
- 19. How many persons took part in the co-authoring of the paper?
- 20. In percentage how big was your contribution to the paper?
- 21. How many hours did you spend on the paper (approximately)?
- 22. What software did you use when co-authoring the paper?
- 23. How did you keep in contact with the other members of the group?
- 24. Was one person in charge of the project?
- 25. Describe briefly the role of the participants.
- 26. In which order is authorship assigned in the final paper?
- 27. What are the prospects of publishing the paper in a scholarly, peer-review, journal?
- 28. Additional comments on collaborative writing of papers at the Bobcatsss 2012 conference

About the author

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