Collaborative Writing in Petroleum Engineering: a Case Study of Petroleum Engineers in an Academic Setting

Michael Anne Coffey

Louisiana State University and Agricultural and Mechanical College

Follow this and additional works at: https://repository.lsu.edu/gradschool_disstheses

Recommended Citation


This Thesis is brought to you for free and open access by the Graduate School at LSU Scholarly Repository. It has been accepted for inclusion in LSU Historical Dissertations and Theses by an authorized administrator of LSU Scholarly Repository. For more information, please contact gradetd@lsu.edu.
Collaborative Writing in Petroleum Engineering: A Case Study of Petroleum Engineers in an Academic Setting

A Thesis

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Master of Arts in The Department of English

by

Michael Anne Coffey
B.A., Louisiana State University, 1987
August 1993
MANUSCRIPT THESSES

Unpublished theses submitted for the Master's and Doctor's Degrees and deposited in the Louisiana State University Libraries are available for inspection. Use of any thesis is limited by the rights of the author. Bibliographical references may be noted, but passages may not be copied unless the author has given permission. Credit must be given in subsequent written or published work.

A library which borrows this thesis for use by its clientele is expected to make sure that the borrower is aware of the above restrictions.

LOUISIANA STATE UNIVERSITY LIBRARIES
ACKNOWLEDGEMENTS

I would like to thank those petroleum engineers who participated in my survey. These people are the true educators, for they see how much they have to offer no matter the discipline.

I thank Dr. Malcolm Richardson, my chairperson, for his time, patience, and willingness to support me in my endeavors. Also, I thank Dr. Michelle Massè without whose encouragement I may not have pursued a graduate degree. My gratitude is extended to Dr. Mary Sue Garay, who aided me in document design. A special thanks to Dr. Carol Mattingly, who was willing to step in and "save the day"! To Dr. Zaki Bassiouni, I owe a great deal—he has been my advisor, my confidante, but even more so, my friend.

I thank my mother, Judith, and father, Michael, for their love and support, and especially my son, Christopher Rigdon, who has truly been my inspiration and motivation.
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iv</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>STATEMENT OF PURPOSE</td>
<td>4</td>
</tr>
<tr>
<td>LITERATURE REVIEW</td>
<td>6</td>
</tr>
<tr>
<td>Introduction</td>
<td>6</td>
</tr>
<tr>
<td>Defining Collaborative Writing</td>
<td>8</td>
</tr>
<tr>
<td>METHODOLOGY</td>
<td>14</td>
</tr>
<tr>
<td>RESULTS</td>
<td>18</td>
</tr>
<tr>
<td>Background</td>
<td>20</td>
</tr>
<tr>
<td>Prewriting</td>
<td>21</td>
</tr>
<tr>
<td>Writing</td>
<td>28</td>
</tr>
<tr>
<td>Post-writing</td>
<td>32</td>
</tr>
<tr>
<td>General Questions</td>
<td>34</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>39</td>
</tr>
<tr>
<td>Prewriting</td>
<td>39</td>
</tr>
<tr>
<td>Writing</td>
<td>40</td>
</tr>
<tr>
<td>Post-writing</td>
<td>41</td>
</tr>
<tr>
<td>General Questions</td>
<td>41</td>
</tr>
<tr>
<td>CONCLUSIONS</td>
<td>43</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>44</td>
</tr>
<tr>
<td>APPENDIX A</td>
<td>48</td>
</tr>
<tr>
<td>APPENDIX B</td>
<td>56</td>
</tr>
<tr>
<td>VITAE</td>
<td>148</td>
</tr>
</tbody>
</table>
ABSTRACT

Interest in collaborative writing has surged in composition studies since the mid-to-late 1980s; aspects addressed include motivation, the composing process, the kinds of participants, authorship, conflict, etc. Much composition research concentrates on collaboration in the workplace to gain an understanding of collaborative writing that can be readily transferred to the classroom and that can prepare students for the social, as opposed to solitary, act of writing—to encourage collaborative thought.

In this study, I attempted to find out more about what occurs in the stages (pre-writing, writing, post-writing) of collaborative writing. My subjects were petroleum engineers on university campuses. Departments were chosen according to faculty size; thus, generalizations about collaborative writing in petroleum engineering could be made.

Petroleum engineers seemed to follow patterns noted in much earlier research in their collaborative endeavors. Their use of outlines as a prewriting technique and their sense of writing as a solitary act appear typical of other collaborative writers. Also, they used collaborative writing as a teaching tool.

These engineers revealed that communication, verbal or written, is essential to the success of their research endeavors. One interesting writing pattern found was that of "parallel writing," where engineers in the same location independently engage in drafting duel outlines of an individual project; once completed they compare the outlines and merge them into one outline. They admitted that disadvantages are present,
but they seemed to believe that the advantages outweigh the disadvantages. Therefore, it is important to continue observing their habits and applying that knowledge in the classroom.
INTRODUCTION

During my time as a technical editor in a Petroleum Engineering department, I witnessed collaborative writing sessions that gave rise to questions in my mind about what it really was to collaborate with someone on a writing/research project. For example, in one instance, a professor handed his colleague a manuscript and asked him to review the article and contribute any valid commentary. Later, the colleague began reading the text, took out his scissors, and began cutting out the sections of the paper he liked. He then taped the sections to blank paper and commenced to write above and below the sections he had taped down. When the paper was published, the professors appeared as co-authors on the research paper.

Interest in collaborative writing has surged in composition studies since the mid-to-late 1980s; aspects addressed include motivation, the composing process, the kinds of participants, authorship, conflict, etc. McConathy (1989) notes that the writer rather than the document has usually become a focus for researchers. This has been the situation also for collaborative writers. Much composition research concentrates on collaboration in the workplace to gain an understanding of collaborative writing that can be readily transferred to the classroom and that can prepare students for the social, as opposed to solitary, act of writing—to encourage collaborative thought. The most recent compilations of this kind include Lay and Karis (1991) and Spilka (1993).

Collaborative writing practices have been commonplace in the sciences for many years, in some cases since before the turn of the century, yet have been, until recently,
a rarity in the humanities. Lunsford and Ede, for example, began writing as a team in the 1980s, withstanding criticism from their peers and actually changing the opinions of their colleagues, in some instances. Their research began with the question, "Why write together?" Paradis et al. (1985) studied collaboration in a research organization. Researchers such as Grice, Batschelet, and Karis answered that question with their own studies of collaborative writing. In personally observing a Petroleum Engineering department full of collaborative writers, I too have my own answers to that question. For example, funding has always been a great motivator, as well as graduate faculty status.

However, my interests lie not in why these people write collaboratively, but what is their composing process(es) and how does it parallel or differ from writing as a solitary act. Do they consider themselves collaborators, or do they feel they write alone, which was the case with many of the Lunsford and Ede (1986) respondents.

My notion of the process of collaborative writing paralleled that which Ede and Lunsford so strongly attempted and succeeded at—composing a manuscript only with each other present and discussing each sentence written. After watching the engineers for a time, I realized Lunsford and Ede's collaborative composing process was atypical.

In this study, I attempted to find out more about what occurs in the stages (pre-writing, writing, post-writing) of collaborative writing. My subjects were petroleum engineers on university campuses. These were chosen mostly because I was familiar with this setting and also because a study of this nature had not yet been conducted.
Because this study was limited and the response was low, I am not attempting to draw any major conclusions about collaborative writing; however, I feel that this study can aid in supporting or rejecting research already conducted.
STATEMENT OF PURPOSE

Many times petroleum engineering students, once in the workplace, write much more than they anticipated and are expected to collaborate with co-workers on various projects—a task that may be difficult for the student who may be shy or awkward or the student who may be somewhat overconfident. The petroleum industry complains that these engineers’ communication skills are lacking. Therefore, engineering colleges are attempting to respond to industry complaints by requiring their students to enroll in writing courses beyond Freshman Composition. Still other engineering colleges are working with English Departments to design "writing across the curriculum" courses to tailor the students’ writing habits to suit industry. Technical writing instructors are finding that teaching collaborative writing in addition to standard technical writing techniques can benefit and better prepare the engineering student for writing in the workplace. Therefore, it is imperative that more is learned about the collaborative composing process of petroleum engineers in order to incorporate the knowledge into the writing curriculum.

A study that specifically addresses petroleum engineers’ writing habits (academic or industrial) has yet to be conducted, so duplication of effort is nonexistent. Petroleum engineers in the academe were chosen as a starting point because 1) they were more accessible to me, and 2) they are instructors and are in many cases open to cooperating with colleagues from other disciplines to provide students with more opportunities for a better education. Information derived from a study of this nature can aid English
instructors and professors in providing industry with more communicative employees as well as heightening their universities' reputations for producing students of a higher caliber.

It is for these reasons that I present information in this study that may contribute to answering the following questions about collaborative writing.

1) Is there a common composing process among petroleum engineers in an academic setting, and if so, what does the process entail?

2) How is that process the same as or different from other collaborative writers' processes as indicated in current research?

The findings of the survey and how these results compare and contrast to information gathered by various researchers are reported.

In this study, I hope to arm technical writing instructors with more insight into the collaborative writing process, specifically petroleum engineers' writing habits, and to aid in substantiating noted researchers' works.
LITERATURE REVIEW

Introduction

Before the mid-1980s, collaboration literature was limited; Batschelet et al. (1991) attribute this to the fact that the academe did not perceive collaborative writing as significant. However, since that time numerous researchers have studied and reported on collaborative writers in the workplace, technology, and classroom. The following is a review of these publications and a discussion of recent major concepts and findings in collaborative writing. Lunsford and Ede were a major source for this review because of their extensive research on collaborating in the workplace.

In asking why professionals tend to collaborate when they write, Grice (1987) found that verifying technical information was critical to scientific research and thus a solid reason for collaboration. Grice’s (1991) object in researching collaborative activities is verification. He writes, "Verification is one of the most important steps in producing good technical information . . . It is also an activity that cannot be done alone" (224).

Within collaborative writing studies, Grice (1991) has furthered Wagner’s (1980) concept of verification activities. Wagner categorizes collaborative activities in twelve classes, some of which include editing, lead-writer editing, peer review, self-review, and review by people with special skills. Grice (1991) organizes these activities into broader groups: editing, reviewing/inspecting, usability testing, and ensuring early
customer involvement. Of these four groups, editing and reviewing/inspecting are discussed.

Lunsford and Ede began working with collaborative writing in the early 1980s and in 1990 published an extensive report of their results on collaboration in the workplace. Three surveys were distributed to seven associations. Initially, they hoped, "to determine the frequency, types, and occasions of collaborative writing" (8). Lunsford and Ede (1986) discussed a questionnaire they distributed to several business communities. In this particular study, they were attempting, "to determine the frequency, types, and occasions of collaborative writing" (Lunsford and Ede, 1986, p. 71). They intended to, "identify more fully a spectrum of collaborative writing forms and strategies" (Lunsford and Ede, 1986, p. 72). They found that a problem for their respondents was in the concept of co-authorship. The respondents in this study claimed to write individually; however, when Lunsford and Ede questioned them later in another sequence of questions, the respondents, "contradicted themselves" and "revealed that they often wrote as part of a team or group" (Lunsford and Ede, 1986, p. 73). "Respondents think of writing almost exclusively as writing 'alone' when, in fact, they are most often collaborating on the mental and procedural activities which precede and co-occur with the act of writing, as well as on the construction of the text" (Lunsford and Ede, 1986, p. 73). In the second survey they inquired about the "kinds of documents respondents most typically write as part of a group; the way . . .
members divide . . . writing activities." (8) In their third survey, Lunsford and Ede conducted personal interviews with a representative from each association.

Ede and Lunsford (1990) concluded that collaboration and collaborative writing is the norm for the workplaces they surveyed. Selzer (1993) also mentioned a generous amount of social interaction in the workplace. Regarding the "physical text" (174), he notes, "The text is not an entity but an event, a kind of dynamic collaboration among seen and unseen writers and readers and texts, all cooperating in the creation of meaning" (174). Reither (1993) recalled "document cycling," a term coined by Paradis, Dobrin, and Miller (1985), whereby during various stages of writing and revising are done by specialists in the workplace.

When is writing a collaborative process also is an important question to note in a review of collaborative writing research. Reither (1993) writes that there are two views on when writing is collaborative: 1) "when writers literally coauthor or write in teams to produce a text" (197) or 2) "writing is always collaborative, because writing always occurs as a dialogic process" (197–198).

**Defining Collaborative Writing**

A major difficulty in confirming or disconfirming lore about collaboration is that collaborative studies research is very diverse (Burnett and Duin 1993). Batschelet et al. (1991) have divided collaborative studies into four distinguishable areas: 1) collaboration in the workplace, 2) collaboration in the classroom, 3) collaboration in
technology, and 4) collaboration studies within composition theory. These categories were derived from the various issues dealt with in collaborative studies. In their annotated bibliography, they cite works from 1982-87 and briefly introduce each section, discussing its major researchers and topics. Of those areas, collaboration in the workplace and collaboration and composition theory are the most relevant to my research.

Burnett and Duin (1993) have sectioned research topics in collaboration somewhat differently from Batschelet et al. (1991) to include the more social aspects of collaboration. They intend, "to offer a way to organize and discuss current research" (5) and to ultimately corroborate or refute "lore" (5) surrounding collaboration. They categorize collaborative research under the following topics: 1) theoretical foundations and arguments, 2) socio-cultural factors, 3) inter- and intra-group structure and process, and 4) technological and ergonomic factors. This study falls into the above mentioned third category, which includes, "collaborative processes in a variety of settings, cultures, and contexts" (7).

Burnett and Duin (1993) offer a continuum for collaboration in technical communication because research surrounding the discipline is incoherent. However, using their above-mentioned categories, I am suggesting a broad but uniform definition based on how other researchers define collaboration. Once this is accomplished, the task of defining collaborative writing for the purposes of this study can be attempted. It is then important to observe how the two are interrelated.
In her discussion of business and academia collaboration, Painter (1991) defines collaboration as, "working together in an intellectual endeavor." (498) Her idea of collaboration parallels that of Debs (1991, "co-labor" [479]), but her definition goes further by providing a purpose for collaboration. Raign and Sims (1993) do not specifically address the definition of collaboration, but in reading research on gender collaboration, I did ascertain that they view collaboration as involving more than one person and that the workload is shared, whether equally or unequally. This was also the situation with Allen (1993, "the many" [65]), Boseley (1993), Kaufer et al. (1993, "divisions of labor" [37]) and Forman (1993).

Since collaborative writing research began, the term "collaborative writing" has become very broad, encompassing many variations of collaboration in writing (Grice 1991). Collaborative writing has existed for hundreds of years but only recently have the various kinds of collaborative composing been "described," somewhat like a plant or animal that humans have never seen and once discovered is given a name and classification. English department researchers who have limited themselves to the humanities may have never witnessed collaborative writing in progress, or more probable is the fact the collaborative writing process has gone unnoticed until the recent surge of interest.

Collaborative writing in its different forms has become very specific. Likewise, a single definition of collaborative writing has not been agreed on. Debs (1991) notes too that defining collaborative writing is interpretive. She defines collaborative writing
broadly as, "co-labor" (479). Generally, definitions assume two or more persons, but not always. Debs (1991) observed that how much, how often, and when writing is done are factors in further defining the term. She divides collaborative writing into, "two processes: the writing process and the group process" (479). Researchers such as Lunsford and Ede (1986), Allen et al. (1987), and Boseley (1989) define collaborative writing with great detail and specificity. Cross (1993) defines collaborative writing as, "the sharing of individual perspectives to produce, presumably, a better written product" (141). Allen et al. (1987) not only define but provide readers with distinctive properties: substantive interaction, shared production, and shared decision-making power.

Some researchers have gone beyond defining and characterizing collaborative writing to classifying its types. Wagner (1980) divides collaboration or verification activities into 12 categories: self-review, peer review, reviews by specialists, design reviews, technical-owner reviews, checklists, testing, mechanical reviews, walkthroughs, editing, lead-writer editing, and user feedback. Grice (1991) re-organizes Wagner’s work into four categories: editing, reviewing/inspecting, usability testing, and ensuring early customer involvement.

These are only a few of the many researchers that discuss defining collaborative writing before they begin a discussion of their research. Because many types and definitions of collaborative writing exist, it is imperative that, for the purposes of this project, collaborative writing is assigned a distinctive and clear definition with regard
to collaboration in petroleum engineering. For this study, the key item that determines whether or not a composing process is described as collaborative is *feedback*, an opinion, insight, idea, or criticism offered by someone other than the writer. Ede and Lunsford (1983) found that talking was a necessary part of collaborative writing. However, feedback is much more vital. Talking is only a component of feedback. Feedback can be verbal or written, but it must be present at some point in the collaborative composing process. A simple "What do you think?" scribbled on a manuscript opens the door to collaboration. Even if the manuscript is returned with a note reading, "It's a strong piece of work, but what about ___?" feedback has been given. The author now has to think about and contemplate the next step in completing the manuscript. Verbal exchange has not taken place, but feedback has been given. To what extent a person takes part in composing a manuscript usually determines whether or not verbal exchange takes place; however, distance can also be a factor. Fax machines and E-mail also make communication easier but without verbal exchange. Based on the various definitions of collaborative writing and my own observations, it seems that feedback must always take place in collaboration.

With this in mind, I initially defined collaborative writing as "any form of feedback, verbal or written, which contributes to the production of a manuscript." I then designed my questionnaire based on this definition. However, I realized that it was important that my results were reported with a clear understanding of how my subjects defined collaborative writing. The questionnaire would be useless if I defined
collaborative writing in one way, and the petroleum engineers defined it another. Accordingly, before the engineers began to concentrate on the questionnaire, I asked them to briefly define what the term collaborative writing meant to them. Basically, the consensus was the same: the project must be produced by a minimum of two persons; however, the engineer’s response included in the definition not only the writing but also the research itself.

Therefore, to encompass all of the respondents’ definitions, collaborative writing, for the purposes of this thesis, is defined as, "two or more individuals, professionals and students, combining their knowledge to create an end product, such as a proposal, report, technical paper, etc., using feedback, verbal or written, to complete the project(s)."
METHODOLOGY

Anderson (1985) writes, "The very purpose of most surveys is to enable researchers to generalize the results they obtain from their respondents (collectively called a sample) to some larger group of people (called a population)." He feels that survey research gives to those interested a way of gaining insight into the ways in which students can be taught more about the process of writing. He claims there are two ways researchers can justify their choice of a sample: 1) technical justification, based on some scientific way in which the survey subjects are chosen, and 2) commonsense justification.

The last—commonsense—was my choice. Departments were chosen according to faculty size; thus, generalizations about collaborative writing in petroleum engineering could be made. For example, Louisiana Tech holds approximately five faculty positions in Petroleum Engineering, while Texas holds about 25. By sampling various faculty sizes, I could make general assumptions about petroleum engineering departments, and I was able to avoid discriminating against, for example, smaller departments and could thus examine a typical or common sample. Another sampling criterion was grant funds received from major oil companies and federal and state organizations to conduct research and award scholarships. This criterion insures that important proposal, report, and technical paper writing activity is present.

A written questionnaire, specifically an essay questionnaire, was developed to collect the data for this research project. Distributing an essay questionnaire as
opposed to dispersing a multiple choice questionnaire or conducting phone interviews has the advantages of collecting more representative and accurate information.

Multiple choice questionnaires are quite helpful in obtaining data for the purposes of calculating statistics; however, they are more likely to lead the respondent to answer the questions quickly without enough thought. Granted, engineers are very busy people and would appreciate how little time it takes to complete a multiple choice questionnaire; however, to gain a thorough understanding of the collaborative writing process, I wanted my respondents to think about their writing habits and relate them to me rather than my attempting to guess about their processes. With a subject matter as detailed as the collaborative composing process of petroleum engineers, it was imperative that I obtain a clear indication of how the respondents actually react to given situations among collaborators. Multiple-choice questionnaires can limit, moderately or extensively, a respondent’s answers because there is no room for specifics.

Phone interviews are another option for gathering data; however, they can be costly to both the surveyor and the respondent. Also, the surveyor must be very careful about giving the respondent too much information and in turn may prod the respondent for biased answers, which leaves the surveyor with subjective, inaccurate data. Phone interviews are most helpful, however, as follow up surveys. This way the surveyor can ask the respondent to clarify remarks made in the questionnaire.
Essay questionnaires can be objective as well as accurate, depending, of course, on their design. They allow the respondent to think about the writing process when collaborating and to describe it in his or her own words rather than the surveyor's. There are, naturally, disadvantages to distributing essay questionnaires. For example, they are long and time consuming; therefore, respondents are less likely to return the surveys. So the researcher must distribute three times as many to obtain adequate data to make representative or general conclusions. Also, the surveyor might require a follow up interview to clarify some responses.

Although there are advantages and disadvantages to these three kinds of surveys, for my particular interests and needs the essay questionnaire suited my purposes. The questionnaire was divided into five sections: introductory, pre-writing, writing, post-writing, and general questions. A pilot was then conducted to correct any misinterpretations in the final questionnaire. The pilot contained three writing areas: proposals, final reports, and research papers. The pilot respondents were chosen based on several criteria and were given one week, more if necessary, to complete the questionnaire. The criteria were selected according to the types of people found in a typical petroleum engineering department: 1) professors and students, 2) English- and non-English-speaking respondents, 3) petroleum engineers. Those selected were one English-speaking professor and one non-English-speaking graduate student. They were encouraged to discuss in depth their answers to the research questions. In hopes that the engineers would not confine their answers, they were invited to use extra paper if
space was insufficient. If a question was unclear, they were asked to explain why they did not understand the question.

Both members of the pilot study agreed to set aside time for a personal interview to discuss the problems or flaws encountered while answering the questions. This questionnaire was found to be too long and time consuming, and the final questionnaire was limited to research papers only. Once typed, the responses were compared and contrasted to each other. From this, a final questionnaire was formed (appendix A).

The final questionnaire was distributed to Petroleum Engineering departments at the following universities: Louisiana State University; Louisiana Tech University; Texas A & M University; University of Texas at Austin; University of Tulsa, Marietta College, Ohio; Stanford University, California; and New Mexico Tech-Socorro. A memo with a general explanation about my research accompanied each questionnaire. This is probably the reason the return rate on the questionnaire was 20%, but there were enough participants for me to observe writing patterns in the respondents' collaborative activities. The results were then compared and contrasted to each other and to other researchers' findings. Expected and unexpected findings were recorded, but more importantly, those expected findings which were not found were noted. Conclusions based on those findings were then made.
RESULTS

The following results are organized according to the questionnaire design (appendix A). The transcribed responses can be found in appendix B.

1. Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

   Earlier in this document collaborative writing for this project was defined as "two or more persons striving to produce a single text." Because co-authorship was a term with which most of the engineers were more familiar, it was used in the questionnaire interchangeably with the term collaborative writing. Before beginning, the respondents were asked to define collaborative writing in their own words. Most agreed on the above definition using such terms and phrases as "joint document, writing effort, together, sharing in the responsibility." Respondent #12 defined collaborative writing as, "2 or more people jointly contribute to the preparation of a written manuscript, report, etc." However, some respondents expanded the realm of collaborative writing to include research, saying, "The contribution of each author may be in the form of experimental data, mathematical derivations, technical knowledge or actual composition" (Respondent #12) or "Working with other faculty members on research" (Respondent #10). Respondent #12 expanded collaborative writing to encompass the research process (i.e., gathering data and interpreting results). Most respondents used descriptions, such as jointly, together, sharing, or writing effort, to describe
collaborative writing. Theoretically, collaborative writing meant, for them, two or more professionals (individuals) writing a research paper together.

Interestingly, as respondents progressed through the questionnaire, other forms of collaborative writing surfaced, especially student/professor writing and author/editor collaboration. Student/professor collaboration surfaced a good deal in the respondents' answers because the research is usually conducted by the graduate students, while the professors act as supervisors. These were expected answers because so much of the type of writing found in academia is student/professor writing.

Respondent #17 sees collaborative writing as a teaching experience, as well as a collaborative effort among peers. For him, collaborative writing is a way to teach students, "to organize and package their material." Although students were not considered in the questionnaire, many respondents answered their questions with regard to their students because for many, these are the only persons with whom they write.

Finally, #19 rejected the concept of "collaborative" writing all together. "The kind I hate: one guy does the work and 3 to five more sign." Sign used here means signing his or her name to the list of authors on the manuscript. This respondent sees collaborative writing as a concept that only works in theory, while in practice, there is no collaboration in collaborative writing.
Background

The questions in the background section were used as a means for describing my respondents. They were asked to identify age, sex, area(s) of specialization, and position.

The respondents were not surprisingly, mostly middle-aged males. Their ages ranged from 30 to 80, with the average age being 49. Of those, 95% were male; only one woman responded. This is, however, very understandable because of the relatively small number of women in petroleum engineering. Currently, women are highly recruited in petroleum engineering, but they are still very scarce in this male-dominated field, especially in the graduate program. For example, Louisiana State University will soon have its first woman Ph.D. graduate. The Ph.D. program is still relatively new, in comparison to other programs (only about 40 have received their doctoral degrees), but until recently, all Ph.D. candidates were male. Therefore, it stands to reason there was a very low response from women in petroleum engineering.

All respondents listed some area of petroleum engineering as their emphasis; however, this did not necessarily mean all respondents received graduate degrees in petroleum engineering. It only means they currently work in a specific area of petroleum engineering. From personal interaction with those engineers at Louisiana State University, I know that some have doctoral degrees in chemistry, physics, mechanical engineering, and/or civil engineering. Those areas specified by
respondents, however, were reservoir, drilling, and production engineering, enhanced oil recovery, formation evaluation, well-log analysis, and petrophysics.

Although well grounded in academe, some respondents were not faculty members in tenure-track positions. These respondents were one manager of research, two senior scientists, and one research associate. The academic respondents were assistant, associate, and adjunct professors and full professors. Some participants had experience in the private sector; others were exclusively academicians; still others were academicians who consulted for the private sector. Also, respondents were from departments with faculties as small as five and as large as twenty-five. Thus a representative group of academic writers in petroleum engineering were surveyed.

Prewriting

1. Do you make it a practice to engage in any preliminary writing activity?

About half of the respondents gave me detailed answers. Of these answers, the most common form of preliminary writing activity was devising an outline. Answers varied as to whether the respondents collaborated with co-authors on the outline, however. Only one respondent reported that he collaborated with his co-author(s) on an outline.

Several respondents chose to answer one part of the two-part question, with a simple yes or no, which made it impossible to report any pattern.
2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

On this particular question, Respondent #3 contradicted himself. He previously implied that he did engage in preliminary writing but without his co-authors; however, in answering this question, he wrote, "we prepare an outline of the topics." He mentions that the graduate student writes the first draft; possibly he regards collaborating with a peer as different from collaborating with a student.

In the previous question, respondent #6 wrote that, "the abstract and the plan of the writing are discussed with coauthors." Possibly, the "plan of the writing" and the outline are the same thing. This would further support the statement made that the most common form of prewriting among the petroleum engineers is devising an outline. Most reported they met with co-authors before any writing began. Aspects discussed or jobs accomplished varied among the respondents. They wrote abstracts, devised outlines, delegated work, set time schedules, and discussed levels of technical content.

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

Almost all of the respondents gave a reason as to why audience was important or unimportant to them. Most felt that audience was important to most important. This was exemplified in respondent #6's answer, "There is no use to broadcast if no one
tunes in." (respondent # 6). In phrasing this question, however, I did not let my respondents know that one meant least important, and ten meant most important. Two of my respondents' answers were useless because they did not answer the second portion of the question.

4. Do you and your co-authors participate in any pre-writing techniques such as brainstorming before you begin to write? Is this done together as a group, or is it done separately? Please explain.

This question was actually question #1 in the prewriting section reworded. But, not surprisingly, I received several contradictory answers. Sometimes the respondents seemed not to understand what it meant to prewrite, or in many instances they either did not read all of the question or did not complete his/her answer. Respondent #1, for example, wrote that he prewrites, and usually devises an outline. In this question he writes that he does not prewrite [perhaps without his co-authors present?] and that he devises an outline. Respondent #2 answers no to question #1, but in this question he writes that, "one author writes an initial outline and the other(s) edits it. Respondent #3 wrote, "Yes, without co-authors," This implies that he engages in some form of preliminary writing; however, in this question, he answers, "Alone."

Generally, the engineers focussed in on the term, brainstorming; they did not, interestingly, consider it a part of the pre-writing stage but did have an understanding of its definition. What seems to have happened in this instance is 1) respondents latched on to the term "brainstorming" and were thrown by it, 2) either question #1 or
#4 was unclear, or 3) respondents identified better with either question #1 or #4. Several of the respondents did not understand what it means to brainstorm, however.

Several of the respondents, nevertheless, provided insightful answers to this question, particularly Respondent #17. His answer was, "Mixed—Many ideas come during joint writing." It seems he is implying that a very complex collaborative process is occurring while preparing a joint manuscript. He seems to be saying that as he collaborates on one project, he and his co-author are already collaborating verbally on future projects. They discuss new possibilities as the old possibilities are materializing. The interesting thing is the respondent may not realize this is happening.

Some of the engineers replied that they did not participate in any pre-writing techniques but did follow outlines, which they seemed not to realize was a pre-writing technique.

5) If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

This question brought the best results for finding out about the respondents' prewriting habits. Almost all of them admitted they used some form of an outline. Even those who said they did not prewrite did, however, follow an outline. Of those who answered the 1st part of the question, a majority responded that an outline is prepared as a group. However, for respondents #1, 6, 7, 9, 13, and 19 the outline prepared as a group is not the first-drafted outline. In these cases, each author prepares his/her own outline, and a final outline is derived from early drafts. Later
drafts may only warrant editing or maybe verbal feedback; in any case, collaboration still occurs.

When asked how closely their outlines were followed, several remarked they attempted to follow their outlines either fairly closely or very closely. Respondent #17 wrote that he tried to adhere to the outline but a "new outline develops as manuscript grows." Respondents #17 and 18 mentioned reorganization as a way in which the outline is sometimes changed.

The only respondent who gave contradictory answers was respondent #15. In the first question, he said he did not prewrite, but he did formulate an outline in his mind. He was possibly unaware that prewriting could be cognitive; however, in this question, he responded, "I do not use an outline." This was rather perplexing; it is possible, though, that this respondent follows the outline he has devised cognitively, but because he does not write out the outline, he considers himself not to be an outline follower.

The general consensus for the second part of the question is that the respondents try to closely follow their outlines. This is understandable because the outline is usually divided and various collaborators are assigned sections of the approved outline. Any digression from the outline could cause confusion, overlap, and communication and organization problems. Also, in a follow-up interview conducted with a representative respondent, the respondent noted that many times the outline is the most common form of prewriting because the outline provides a means for an end
result. He said the petroleum engineers tend to be design and project minded—results oriented. They have a need to anticipate results—an outline does this for them.

6) How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

The most common answer for this question was very informative. Ten of the nineteen respondents wrote that one person writes the first drafts, while co-authors are present for editorial purposes or for contributing data or graphics. Several of the respondents wrote that only one person writes the draft, and the co-author(s) edits the draft. This contradicts some researchers’ (Forman, Ede and Lunsford) belief in sectional contribution. However, this does not mean that sectional contribution is not present in other workplaces or even in other petroleum engineering departments.

But, those times when the work is divided among the authors, it seems the principal author decides who will write a specific section. Respondent #12 wrote, "co-authors usually write the section concerning their area of expertise." This, to me, was the expected answer for this question. Rather than the primary author deciding the division of work, I expected the division to be a collaborative decision. Unfortunately, no one offered a reason why the primary author decides.

Interestingly, I also expected more authors to write the research papers. Instead the kind of collaborative writing they participate in is editor/author collaboration under the pretense of author/author collaboration.

Also, it seems graduate students generally carry the burden of writing the paper, while the professor edits the paper and lists himself/herself as a co-author. This type
of collaboration, however, works to the benefit of both parties. The professor's reputation can aid the student in getting his/her paper accepted for publication, and the professor gets credit for a publication in a "publish or perish" environment: the university.

On more than one occasion respondents admitted that if the co-author was a graduate student, the student usually wrote the draft paper.

7) In the group conference(s), do you and your co-authors write or speak as you all organize your thoughts? Briefly explain your answer.

Responses to this question were somewhat mixed; there were no real majorities. For example, respondent #16 wrote, "we have reviewed each others' efforts on the various sections, and make suggestions and revisions as we take up those sections and discuss each in turn." Likewise, respondent #13 wrote, "Usually an open discussion occurs i.e. very informal, with anyone speaking who wants to. We will often examine available resource material e.g. a report, thesis, the literature, books, notes, laboratory data, computer print outs, plots, computer codes, etc, whatever is pertinent." Respondent #7 remarked, "Usual write and speak we get about the [blackboard] while will make outline."

According to the respondents' answers, however, speaking is the primary form of communicating or exchanging ideas in group conference. It seems in the cases where speaking is primary, the outline for the paper has already been devised, and the next step is to review, discuss, and approve the outline.
Three kinds of writing occur before and during these conferences: written exchange of ideas, note taking, and what I term parallel writing. Parallel writing is a phrase I've coined for this particular study, where authors write in the same location but do not communicate or interact in any way while writing. I decided this was the best way to describe the scenario when I was reminded of what sociologists term parallel play. Parallel play is a stage preschoolers experience where they play in the same locale as other children but do not interact with the children.

The outline surfaces frequently in this response. Although spoken discussion is the primary method used in conferences, discussion often centers around the outline.

Writing

1) Do you generally handwrite your draft(s) or type it into the computer?

Because of the availability today of personal computers, the most common response was, of course, typing drafts into a computer. However, a few still chose to handwrite their drafts. Respondent #6 insisted he was too old to learn to type (he's 80)! Others who handwrote their drafts only wrote when a typist was available.

The most interesting and, to me, insightful response to this question came from respondent #15; he wrote, "use of a typewriter or a computer hinders free-thinking." Possibly, like many people, he is a "hunt-and-peck" typist, which could easily hinder his cognitive processes. Use of computers could hinder or aid in collaboration. For example, co-authors can sit and write together, but can they sit and type together? Perhaps. That is, if they carry their laptop computers with them. But, how likely is
that? On the other hand, trading diskettes makes revision quite easy, and the petroleum engineers do admit that one author writes, while another edits.

2) Do you write with your co-authors present, or do you write alone? Briefly, describe one of your writing sessions either as a group or alone.

The response here was almost unanimous: they write alone! Because they write alone, they in turn did not give acceptable responses, i.e., describing a writing session, to the second section of the question. Respondent #6 gave a feasible answer; he writes, "Some of the most important writing sessions have been done with all authors seated around the table writing against a deadline. We interrupted one another frequently on ways to explain succinctly a high priority issue."

Respondent #17 gave some insight into collaboration through the mail system. He remarked, "With some authors a working manuscript is exchanged by mail (say for authors in other countries) but final wording can be decided together."

3) Do you discuss revisions with your co-author(s), or do you make your own revisions?

Some responses gave insight into the revision process. Respondent #1 revised his own draft and forwarded it to co-authors for additional editing. Also Respondent #2 wrote, "A minimum of 2 revisions are made prior to forwarding to co-authors." Likewise, Respondent #4 made his own revisions and then discussed them with the co-author.
Other respondents remarked that they always discussed changes with co-authors but did not mention when the discussion occurred. For instance, did they make no revisions until co-author was present?

None of the respondents wrote that the co-author made revisions and then those revisions were discussed. However, personal observations I’ve made as a technical editor show me that co-authors many times make substantial changes and then revisions are discussed.

4) Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

Twelve out of nineteen respondents wrote that they waited until their draft was complete before beginning to revise. Respondent #7 remarked, "too chaotic otherwise." Respondent #6 wrote, "Usually revision occurs after . . . . However, in the case mentioned before . . . Revision was a careful, continuous detail. Word engineering, syntax . . . is of real concern."

In looking back to question #1 in the writing section, I noticed that those respondents who revised as they wrote were typically the ones who type their drafts into the computer. Interestingly, no response was dominant in those who revised after they had completed their manuscript. There seemed to be no pattern for writing or typing.

5) Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.
For a majority of the authors, a writing session of no more than five hours was typical. However, some respondents, such as #1, #4, #8, or #12, seemed to work on the draft until it was complete. Respondent #4 wrote, "Few days in a row," i.e., he wrote non-stop for several days; he did not define "non-stop." Respondent #1, however, would, "sit down and write an entire paper in a single day."

Several respondents mentioned deadlines and how these deadlines determined the length of a session. Respondent #9 wrote, "Depends on what else needs to be done, and on how close is the deadline." Likewise Respondent #18 remarked, "Varies tremendously depending on deadlines and other factors." He did not, unfortunately, mention what those other factors might be.

6) Does this time differ if your co-author(s) is present? Please explain.

Of the two whose answers I was able to use, both agreed that sessions with co-author(s) were longer. This was basically the response I expected because ideas and opinions of the co-author must be taken into consideration. Writing alone, there is no one present to disagree.

But most responded to but did not clearly answer this question. For example, Respondent #5 simply answered "no." Yet on question #2 in the writing section he wrote that he writes alone. By answering no to this question he implied that the co-author is sometimes present when he is writing and that the writing time does not differ when the co-author is present. He possibly meant that he did not write with his co-authors; therefore, the time did not differ. However, because he did not respond
with a "not applicable" as did #1 and #3, I cannot, for this study, make that assumption. Respondent #18 also did this.

7) What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

Many respondents stated they set the paper aside for a day or longer. Four others responded they take a short break or coffee break. Most chose one of the examples included in the question. It is for this reason, I hesitate to note any patterns regarding this question. Perhaps they really do take these kinds of breaks. I know in my own writing process, short, sometimes long, breaks allow me to look at my dilemma from a different perspective; however, when I do become puzzled or lost, it helps me to seek the advice of a colleague and explain to him/her my situation. It strengthens my writing to participate in a verbal exchange. Therefore, I very much expected the same from these engineers; more so, because they were collaborating on a project, whereas I do not.

Postwriting

1) Are most revisions on a sentence, paragraph, or section level? Please explain.

Nine of the nineteen respondents wrote that their revisions were mostly on a sentence level. This was the expected response mainly because most paragraphs and sections would have been decided when the outline was approved by all co-authors. This was in fact the reason some respondents gave for their revisions being done on the sentence level.
However, more respondents than expected noted their revisions were on a paragraph, even section level. Respondent #12 wrote that she noticed her revisions were on a paragraph or section level where she was, "less familiar with the material or have difficulties expressing what I want to say." Respondent #13 wrote that he began revision at the section level and worked his way down to the sentence level. Yet his response to question #5 in prewriting showed he used a group-approved outline for writing his paper.

2) What is a recurring revision problem in your papers? Please explain.

The responses to this question were as individual as the respondents themselves. Remarks ranged from too wordy to a lack of ability to convey points.

Oddly enough, respondent #5 remarked that his problem was being "too wordy." Yet all of his responses to the questionnaire were under five words for each question!

Respondents #7, #8, and #18 complained of grammatical problems, while respondents #2 and #15 saw no recurring problems in their writing.

Respondent #19 had never heard of a recurring revision problem!

3) Generally, how much emphasis do you place on revision? Please explain.

This question received the clearest and best response in the questionnaire. All but three of the respondents wrote that revisions were the deciding factor in creating an excellent paper. Respondent #16 wrote, "It would be unthinkable (and probably unreadable as well) to stop at a first draft." Respondent #19 wrote, "Very important a paper must be perfect."
Respondent #5 chose not to answer this question, and Respondents #4 and #14 placed little emphasis on the importance of revision to a manuscript.

4) Does your co-author(s) revise your work, or is revision a group effort?

There were four different answers for this question, the most common being the co-author revises. Seven of the nineteen delegated revision to the co-author. Only two wrote that revision was a group effort, and two remarked that it was an individual effort.

Several respondents, however, answered that preliminary efforts were individual and later revisions were the responsibility of either another co-author or a group of co-authors.

Respondents #5 and #14 only remarked "yes." This possibly means that revisions were made by the individual as well as the co-author(s).

General Questions

1) Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom you write? Please specify co-author by sex, age, and area of specialization. (No names please.)

Responses fell into two categories. Eight respondents indicated they have no preferences with whom they write, as long as the co-author is amicable or has something significant to contribute to the project. However, seven of the respondents wrote that areas of specialization determine with whom they worked. But to some it was also important that the co-author have the same interests, even though their areas
of specialization may differ somewhat and that their personalities complimented one another.

The most common ages for co-authors were between 23 and 30 and most were male. The dominant sex being male is, of course, understandable because of the lack of women in the field of petroleum engineering. The average age was also typical of graduate students.

2) Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

Overall, the response to this question was very positive; most felt that collaboration was in some way beneficial. Respondent #7 wrote, "vital to new thoughts." Respondent #11 wrote, "Brings out concepts differently, and a new perspective." Respondent #16 quoted an old clichè, "two heads are better than one."

Interestingly, Respondent #15 sees collaboration as a learning experience for the graduate students and as beneficial to the quality of the paper; however, he does not see it as beneficial to himself. But, Respondent #9 remarked, "One can learn by teaching." Graduate students often open those tired professional eyes to new insights!

3) List the advantages of collaborative writing for you.

There was a variety of advantages of collaborative writing given. The overall sentiment seemed to be that collaborative writing promotes open mindedness or, at least invites writers to see a problem from another perspective. For instance, Respondent #6 wrote, "More likely to explore all facets of a given issue or problem." Respondent #17 wrote, "Exchange of ideas Discussions stimulate ideas."
Other common advantages were that collaborative writing reduced the workload, improved clarity and readability, and reduced mistakes.

4) List the disadvantages of collaborative writing for you.

Respondents #5, #14, and #19 did have negative comments about collaborative writing. They were: "Too many revisions" (#5), "takes too long to accomplish goals" (#14), and "You write and do not get your name on the publication, it happened to me once" (#19). Respondent #19's negative response was stronger than the typical respondent due it seems to a bad experience; therefore, his responses carry less weight in my deductions and conclusions.

Time and revisions seem to be the common disadvantages for the engineers. Respondent #2 also noted, "More work involved to please all authors."

Respondent #12 noted a very common problem and disadvantage to collaborative writing, that of signing on as a co-author for political purposes. I have witnessed this in my own experiences as a technical editor, and it is, in some environments, quite common. Many times a name that carries much "clout" will be added to an author listing to give the researchers a better chance of being awarded a grant or contract that is sometimes hundreds of thousands of dollars. Other times professors have insisted their names be place first in an author listing; even though, the student has done a majority of the work. However, it seems to be a disadvantage that cannot be amended and, in any case, has little to do with the writing process itself.

5) For convention purposes, how is the author who presents decided?
The most common answer here was the major contributor, who in many cases is the principal investigator or author. The second most common response was the student, if he or she is available. Time and availability were factors, as well as speaking ability, money, native language, and familiarity with research and material.

6) How is the order of the author listing decided?

The overriding response here was that the major contributor is usually listed as primary author. However, several professors mentioned they always listed their students first.

Some responded that alphabetical listings are also common, and Respondent #12 noted political intervention as a possible reason why major contributor might get "bumped" from primary listing.

7) Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

Seven of the nineteen respondents made additional remarks. Respondent #10 noted that he collaborates if the co-author's contribution is worthwhile, and their relationship is amicable.

Respondent #12 wrote, "I find it very useful for an editor to check the paper for grammatical and spelling errors."

Respondent #13 mentioned the use of electronic mail and fax copies for a speedier process.

Respondent #15 emphasized that collaboration was alright for papers but not textbooks.
Respondent #16 pleaded for better writing and a decrease in jargon.

Respondent #19 still hates collaborative writing!
SUMMARY

In response to my research questions, there is a very broad, yet consistent, collaborative writing composing process among petroleum engineers in an academic setting. Also, this process seems to parallel the writing habits of many collaborators in technical fields, Lunsford and Ede excluded, understandably, because of their liberal arts background. The following is a breakdown of the writing process found to be common among the respondents.

Pre-writing

Assorted pre-writing techniques such as verbally communicating or exchanging ideas are used to produce a joint document, but the most prevalent found was drafting an outline. Outline drafting does, however, vary between a collaborative effort and a solitary act. Outline design ranged from comparing completed outlines by the principal investigator to dividing the task of devising the outline among all contributors. The process of drafting even varies on a collaborative outline. Respondents noted that they devised the outline together or took portions of each other's outline to draft the final outline.

Oral discussion in conferences was vital to the pre-writing process, which greatly supports Ede and Lunsford's findings. According to the information provided, discussions among collaborators was an integral part of producing a joint document. Similar to what others (Debs, Boseley, or Allen et al.) have noted, pre-writing seems to be the stage at which collaboration is most pronounced.
One other pre-writing technique discussed was, of course, brainstorming. Many respondents seemed familiar with the term and had a solid understanding of the concept. Some noted that they used brainstorming to generate collaborative efforts and even used it unknowingly during ongoing collaborative projects. Here too I found that communication with co-authors is commonplace.

During pre-writing, audience was considered, whether verbally or cognitively, and most responded that consideration of their audiences was important.

Writing

Writers insisted they write alone, very much paralleling the researchers' earlier works (Bruffee, Hawkins, Coe) mentioned by Ede and Lunsford (1990), which say that, "Peers can work collaboratively in every stage of the writing process except for drafting. In these and other early models . . . students inevitably draft alone" (9). However, observing one group of respondents led me to believe that this was not always the case. I observed writers from time to time stopping by their co-authors' offices to ask a question about the research or to review the construction of a sentence. They even stopped frequently to ask the editor questions about word usage, syntax, or clarity in a sentence. Granted, collaboration was not as prominent during this stage, but it was present.

For this group of respondents writing sessions usually last five hours or less. Some, though, commented that they could finish a draft in a day. If writing with the
co-author(s), writing sessions sometimes lasted longer, therefore implying that collaborative efforts are more time consuming.

Most respondents type their drafts into a computer; however, some still cling to their pencils. Two notable reasons for clinging to handwriting drafts was that it "hinders freethinking (respondent #15)," and it can hinder collaboration.

Post-writing

Collaboration is prevalent once again at this stage of revision, review, and editing. Signs of the original discussions dating back to the pre-writing stage are still prevalent in the post-writing stage. Respondents who revised as they wrote were usually the ones who type their drafts into a computer. Most respondents commented that their revision work was done on a sentence level. And yet, several changed their work by paragraph and even by section. Because all parties concerned must or should be satisfied with the end result, this type of revision generated more collaboration on the parts of the co-authors. Co-authors then assumed the role of editor, as Grice noted, to verify the technical information. This, in turn, created more of a need for talking among the collaborators. Thus, communication also becomes a primary factor in the post-writing stage.

General Questions

The faculty generally found advantages and disadvantages to participating in collaborative writing projects. Ede and Lunsford (1990) found some of the same advantages and disadvantages as the petroleum engineering faculty. They found that
there were factors present that determined degree of satisfaction. These factors were much the same for the petroleum engineering faculty members. For example, some similarities were "degree of openness," "degree to which writers can respond to others," authorship credit, deadlines, procedural differences or conflicts, and "the status of the project within the organization" (65).
CONCLUSIONS

In summary, petroleum engineers seem to follow suit in their collaborative endeavors and even appear typical of collaborative writers. Based on my observations of a petroleum engineering department, I found document cycling (see Paradis et al.) present; however, whether or not it was present in other departments was not pursued in the questionnaire.

As Lunsford and Ede conclude, talking is a necessary part of creating a collaborative document. These engineers reveal that communication, verbal or written, is essential to the success of their research endeavors. They admit that disadvantages are present, but they seemed to believe that the advantages outweigh the disadvantages. Therefore, it is important to continue observing their habits and applying that knowledge in the classroom.
BIBLIOGRAPHY


Dainte, C. 1986. "Do 1 and 1 Make 2?" Written Communication. 3:382-408.


APPENDIX A
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Background:

Your age:

Your sex:

Your area(s) of specialization:

Your position:

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.
3. On a scale of one-ten, rank the importance of audience to your publication. Why?

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.
7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.
5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

6. Does this time differ if your co-author(s) is present? Please explain.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.
2. What is a recurring revision problem in your papers? Please explain.

3. Generally, how much emphasis do you place on revision? Please explain.

4. Does your co-author(s) revise your work, or is revision a group effort?

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).
2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

3. List the advantages of collaborative writing for you.

4. List the disadvantages of collaborative writing for you.
5. For convention purposes, how is the author who presents decided?

6. How is the order of the author listing decided?

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?
APPENDIX B
RESPONDENT #1
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Collaborative writing means that two or more individuals combine their knowledge and skills in writing a single paper or document.

Background:

Your age: 43
Your sex: Male
Your area(s) of specialization: Production Engineering
  Formation Evaluation
  Well Stimulation
Your position: Professor

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

   Yes. Before I write any technical paper, I put together a detailed outline of the paper and collect all tables, graphs and figures that will be included in the paper. I also tend to compile all pertinent references and have them available prior to beginning writing the paper.

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

   Yes, on occasion. Normally, the audience that will be in attendance at any technical paper will be other graduate petroleum engineers. Therefore, the style and level of technical content is usually straight forward. However, on occasion presentation will be made to a less sophisticated audience. On those occasions, the level of technical content may be reduced.
3. On a scale of one-ten, rank the importance of audience to your publication. Why?

On a scale of one-ten, I would rank the importance of the audience as five. The audience is important when the presentation is made; however, if the paper is well written it will be published in a magazine and will be widely read by others in the industry. Because of the diverse nature of our industry, many petroleum engineers are not interested in every paper that is written.

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

Normally, no. The only sort of pre-writing techniques that are used is to develop detailed outlines and prepare all necessary tables and graphs. Once these items are prepared, the technical writing is fairly straightforward.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

Normally, the outline is prepared by the primary author. The outline can then be given to secondary authors for additional editing.

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

Normally, the primary author writes the entire paper. The secondary authors then will edit and add to the paper as necessary. Many secondary authors are listed on the paper title because they did some of the work that is included in the paper.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

Not necessarily. Many times, the time allotted for making the presentation does not allow one to cover all the material in a particular paper in detail. Therefore, the organization of the presentation will not necessarily follow the organization of the paper. However, in most instances it will closely resemble the paper.
Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

I generally dictate the first draft of all papers.

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

I write all papers alone. Once the outline, tables, and graphs are prepared, it is quite simple to dictate a first draft of most papers.

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Both. I usually edit my own papers and also allow the co-authors to edit as they wish.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

Normally, I write a complete copy of the entire paper and then begin the editing process.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

Normally, I will sit down and write an entire paper in a single day. After the first draft is written, the editing process will go on for several days until everyone is completely satisfied with the content of the paper.

6. Does this time differ if your co-author(s) is present? Please explain.

Not applicable. The co-authors of all papers are not present when the writing occurs.
7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

Normally, I do not become frustrated. In my opinion, frustration comes from not being able to express your ideas clearly. Under that circumstance, one probably should not writing a paper on the specific subject that causes the frustration.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

Most revisions are on the sentence level. If one prepares a complete and detailed outline prior to beginning writing the paper, then sections or paragraphs do not necessarily have to be changed at the completion of the paper.

2. What is a recurring revision problem in your papers? Please explain.

Normally, when I dictate a paper, I will use terminology that is usually acceptable during speech but not necessarily technically correct. I usually have to go back and change words to make the technical writing seem more sophisticated.

3. Generally, how much emphasis do you place on revision? Please explain.

I will normally rewrite portions of the paper 2 to 4 times before I am completely satisfied. Usually, the revisions will tend to shorten and compact the technical content and make the paper more readable for the audience.

4. Does your co-author(s) revise your work, or is revision a group effort?

Each individual co-author has an opportunity to edit each paper. Normally, we work individually and not as a group.
General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

No. I have written with numerous individuals with no problems whatsoever.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

Yes. Anytime you work with competent individuals, they are able to edit and improve virtually any project one is working on.

3. List the advantages of collaborative writing for you.

Yes. Anytime you work with competent individuals, they are able to edit and improve virtually any project one is working on.

4. List the disadvantages of collaborative writing for you.

I really do not see any disadvantages. If all individuals can cooperate and work together as a team.

5. For convention purposes, how is the author who presents decided?

Normally, the primary author is the individual who does most of work and will make the presentation.

6. How is the order of the author listing decided?

Normally, the authors are listed by how much time and energy they expended in developing the work required to incorporate in the paper.

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

No.
RESPONDENT #2
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Joint authorship of a technical paper or report.

Background: Ph D, Petroleum Engineering, 1986

Your age: 30

Your sex: Male

Your area(s) of specialization: Drilling

Your position: Assistant Professor

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

No.

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

No.

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

8. Audience dictates the details that need to be covered (or not covered) in the paper.

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.
Typically, one author writes an initial outline and the other(s) edits it.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

see 4 above

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

As with the outline, one author, the first author, writes the paper and others then edit and suggest changes or additions. The first author is generally responsible for initial organization for the entire publication. I generally do not use a pre-writing technique in conjunction with others.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

NO

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

Type

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

I write alone. Sessions are generally 1-2 hours in long.
3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Both. A minimum of 2 revisions are made prior to forwarding to co-authors.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

Both. I typically revise on a paragraph by paragraph basis until satisfied with structure.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

1-2 hrs per session, 2-3 sessions per week.

6. Does this time differ if your co-author(s) is present? Please explain.

Yes. If a co-author is present, suggestions are reviewed in 1/2-1 hr.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

I put the paper away for a day or two.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

Section level. I revise on the wordprocessor as I compose so that paragraphs are structured. Revision at later time will be either simple re-arrangement or deletion/addition.

2. What is a recurring revision problem in your papers? Please explain.

No recurring problems come to mind.

3. Generally, how much emphasis do you place on revision? Please explain.
I think revision is the most important aspect of writing. I continuously revise as I write. I think this is a function of composing on the word processor.

4. Does your co-author(s) revise your work, or is revision a group effort?

Usually singularly at first; If problems remain, a group session may be used.

**General questions:**

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

   topic dictates co-authorship.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

   I don’t think co-authorship affects the actual writing, but dictates content and quality.

3. List the advantages of collaborative writing for you.

   1. Confidence in technical aspects of paper
   2. Political advantage in allying with well known or respected co-authors.

4. List the disadvantages of collaborative writing for you.

   1. More work involved to please all authors.
   2. Time consuming to go back and forth between authors.
5. For convention purposes, how is the author who presents decided?

The person that does the basic work or generates ideas.

6. How is the order of the author listing decided?

By importance of contribution.

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

NO.
RESPONDENT #3
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

cooperative effort in writing a paper

Background:

Your age: 31
Your sex: M
Your area(s) of specialization: Reservoir Characterization
Your position: Associate Professor Pet. Eng.

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Yes-without co-authors

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

Yes - the research is worked on together - we prepare an outline of the topics. Typically, a graduate student, if experienced, writes a first draft-

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

Mostly I publish for the people who are familiar with the area. So, it is fairly complex.

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.
5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

Outline developed as a group - followed fairly closely

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

Unless graduate student is new, he/she writes the first draft after the outline is prepared.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

Mostly speaking preparing outline -

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

Type it on computer

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

Alone - Revisions are done together

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Revisions only after discussions
4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

After draft is complete

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

1 hr - 5 hrs.

6. Does this time differ if your co-author(s) is present? Please explain.

N/A

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

coffee break - once I start, I finish it
Don’t start something else unless I am finished

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

Depends - even upto section level

2. What is a recurring revision problem in your papers? Please explain.

getting ideas across clearly

3. Generally, how much emphasis do you place on revision? Please explain.

No draft is good unless it is rewritten at least two times

4. Does your co-author(s) revise your work, or is revision a group effort?

group effort
General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

Area of specialization
co-authors: between 20-35 age, mostly males

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

Yes
3. List the advantages of collaborative writing for you.

You can learn as well as you teach

4. List the disadvantages of collaborative writing for you.

None

5. For convention purposes, how is the author who presents decided?

principal author -

6. How is the order of the author listing decided?

The one who does the most work is first

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?
RESPONDENT #4
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

to write a paper/proposal/essay together with somebody else

Background:

Your age: 46

Your sex: M

Your area(s) of specialization: PETE

Your position: Assoc. PROF

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

YES, W/O

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

NO, I BELIEVE IN ONE MIND’S CUT, FIRST

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

10, CONFRONTATION WITH OTHERS CRITIQUE IMPROVEMENT
4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

NO, refer to 2
BRAINSTORMING IS GOOD ONLY WHEN VIRTUALLY NOTHING IS KNOWN ABOUT SOLUTION TO A PROBLEM. IN RESEARCH, WRITING STAGE FOLLOWS THE RESEARCH, NOT PROCEEDS IT.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed? (on my own) VERY CLOSELY. I BREAK THE CONTENT INTO PARAGRAPHS FIRST.

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

ALL IS DONE BY ONE PERSON - OTHERS GET THE READY TEXT AND ARE SUPPOSE TO CHANGE IT.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

YES, I THINK SPONTANEITY IS GOOD FOR PREACHING, NOT SCIENTIFIC EXCHANGE

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

HANDWRITE
2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

WRITE ALONE
IT HAS TO BE THE FIRST THING IN THE MORNING

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

1 MAKE MY OWN REVISIONS
2 DISCUSS REVISIONS WITH YOUR CO-AUTHOR

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

AFTER MY DRAFT IS COMPLETE

THE BEST RESULT IS ACHIEVED WHEN CO-AUTHORS ARE TRULY MOTIVATED TO CRITICIZE THE TEXT, NOT JUST TO GET IT DONE (COMMON CASE)

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

WITHOUT - FEW DAYS IN A ROW (THE BEST RESULT)

6. Does this time differ if your co-author(s) is present? Please explain.

AT THE STAGE OF FIRST WRITING, THE CO-AUTHOR SHOULD NOT BE PRESENT

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

I GO ON FORCIBLY OR GO HOME AND TRY THE NEXT DAY. USUALLY I CANNOT AFFORD LONGER DELAYS.
Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

SENTENCE- IF CO-AUTHOR IS INTERESTED ONLY IN PROVING THAT HE HAS MADE CONTRIBUTION

PARAGRAPH- CO-AUTHOR CONTRIBUTES HIS GENERAL KNOWLEDGE ON THE SUBJECT

SECTION- CO-AUTHOR HAS MADE INDEPENDENT CONTRIBUTION TO THIS RESEARCH

2. What is a recurring revision problem in your papers? Please explain.

3. Generally, how much emphasis do you place on revision? Please explain.

LITTLE, AS FOR A THIS MERIT IS CONCERNED

4. Does your co-author(s) revise your work, or is revision a group effort?

INDIVIDUAL EFFORT!

GROUP WRITING IS EFFICIENT ONLY FOR LEGISLATIVE ACTIONS (VERY SLOW)

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

STUDENTS OF OTHER RESEARCHERS
I HAVE NO PREFERENCES

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

YES, IF THEY HAVE TIME TO CONTRIBUTE
3. List the advantages of collaborative writing for you.

1 - DEBUGGING (GRAMMAR & MERIT)
2 - ADDING NEW ANGLES (OTHER REFERENCES EFF)
3 - ADDING NEW RESEARCH (INTERDISCIPLINARY EFFORTS)

4. List the disadvantages of collaborative writing for you.

1 - TIME CONSUMING, IF NO LEAD PERSON
2 - LOGISITIC PROBLEMS (MEETINGS, etc)
3 - PERSONALITY PROBLEMS (EACH PERSON HAS ALREADY DEVELOPED IT OWN COMMUNICATION STYLE - IT IS DIFFICULT TO COMPROMISE) often results in messy message

5. For convention purposes, how is the author who presents decided?

1 - THE LEANING AUTHOR
2 - THE AVAILABLE AUTHOR

6. How is the order of the author listing decided?

BY CONTRIBUTION & LEADERSHIP

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?
RESPONDENT #5
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Background:

Your age: 49
Your sex: M
Your area(s) of specialization: Drilling/Production
Your position:

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

   NO

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

   NO

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

   5

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

   NO
5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

NO

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

one writer writes the draft - then it is edited by all

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

computer

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

Alone

whenever possible

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Both

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

after
5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

whatever possible

6. Does this time differ if your co-author(s) is present? Please explain.

NO

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

put paper aside

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

section

2. What is a recurring revision problem in your papers? Please explain.

too wordy

3. Generally, how much emphasis do you place on revision? Please explain.

4. Does your co-author(s) revise your work, or is revision a group effort?

yes
General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

no difference

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

not necessarily

3. List the advantages of collaborative writing for you.

none

4. List the disadvantages of collaborative writing for you.

Too many revisions

5. For convention purposes, how is the author who presents decided?

Major contributor to paper

6. How is the order of the author listing decided?

?

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?
RESPONDENT #6
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Joint Document

Background: Ph.D. Chemical Engineering, U. Texas 1937; 40 yr. Prod Research, Exxon; Professor, Petroleum Engineering 1974 -

Your age: 80 yrs

Your sex: Male

Your area(s) of specialization: Petroleum Production Engineering

Your position: Professor

Prewriting: Most experience in rewriting.

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Usually, first draft without co-authors.

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

The extent preliminary discussion depend on the number of co-authors and previous association in the area of the subject matter.

1 In the case of one other who has jointly participated in the activity being covered, an informal dividing up topics to come with first drafts.

2 In the case of a multi-author paper, a brainstorming session of the area involved followed by a serious endeavors adopting an outline (perhaps somewhat extended). The most serious sessions follow the exchange of first drafts of assigned of the task of preparing a penultimate draft. It shouldn’t appear to be the work of a committee

3. On a scale of one-ten, rank the importance of audience to your publication. Why?
There is no use to broadcast if no one tunes in.

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

See 2

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

I prefer that each author prepare separately the preliminary outline. This greatly reduces time of coordinating final outline. Unless the sequence of the topics later seem to suggest a change in sequence or combination of subject matter, outlines should be followed religiously

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

In the case of books, chapters may be assigned on the base of the author's area of expertise, otherwise, topics on sections are assigned somewhat on the same basis. Seldom are paragraphs assigned at first, but in rewriting or editing a second author many times will take a crack at it.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

In a group conference, presentation by a single author is preferred (expodites the presentation). Discussion may be handled by various one depending on their original participation in writing the paper

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

Longhand - too old to learn to type (my excuse)
2 drafts before showing to others

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.
Some of the most important writing sessions have been done with all authors seated around the table writing against a deadline. We interrupted one another frequently on ways to explain succinctly a high priority issue. In one case, a National Research Council Report, I then stayed up all night arranging and smoothing a final draft.

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Always, discuss thoroughly and seldom override suggestions.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

Usually revision occurs after a draft is completed. However in the case mentioned before on the NRC report. Revision was a careful, continuous detail. Word engineering, syntax, can it be misunderstood, etc is of real concern. The matter of writing against time constraints is a serious matter. Do what seems most expeditious.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

Usually less frequent longer periods. Frequently, half day at a time on a writing session of say a week's duration.

6. Does this time differ if your co-author(s) is present? Please explain.

Practically always with coauthors present.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

Coffee breaks don’t help me much. I move on to another part of the outline and come back much later unless a flash insight suddenly appears out of the blue in which case I rush back to the troublesome topic, even it is in the middle of the night.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.
Most revision are at the paragraph level with the addition of more complete information of real significance to full understanding occasionally less important detail may be omitted as distracting to effective communication. Sentences though are also of concern. I usually speak informally with dangling participles or phrases and these pester my writing also.

2. What is a recurring revision problem in your papers? Please explain.

I usually write today on technical matters to non-technical audiences. Communication in these cases is always difficult as the awareness level of various audiences varies so greatly. How to write for the least informed without turning others off is a art largely sought.

3. Generally, how much emphasis do you place on revision? Please explain.

I place so much emphasis on it that I have a cadre of reader from the realm of the projected audience to critique my papers.

4. Does your co-author(s) revise your work, or is revision a group effort?

In Petroleum Engineering I do my own revision except as indicated by consultation with peers or co-workers. In the Bureau of Economic Geology where I wear another hat, there is a editing group that is supposed to make sure that Bureau reports meet certain standards. Occasionally they claim that proper grammar or what ever requires a sentence to say some completely foreign to my intent or understanding. This usually results in a hassle.
General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

I have had two co-workers, one male my age and another female somewhat younger with whom I developed a special camaraderie when it came to writing. We had a number of very gratifying and rewarding papers and reports. The male was a mathematician. The female was a geologist.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

The age or stature or experience has had little to do with it, but it surely help if we can talk somewhat the same language and yet feel comfortable in candid appraisals.

3. List the advantages of collaborative writing for you.

1. More likely to explore all facets of a given issue or problem
2. Aid is assuring understanding by the intended audience

4. List the disadvantages of collaborative writing for you.

1. It takes more time, energy and patience

5. For convention purposes, how is the author who presents decided?

The youngest researcher or author should be given priority

6. How is the order of the author listing decided?

In my case the order should be alphabetical unless there is an overriding reason, i.e., based on one of the authors work or fields

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?
RESPONDENT #7
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Writing reports, professional or other technical articles with other professionals

Background:

Your age: 52

Your sex: Male

Your area(s) of specialization: Drilling, Production, Petroleum Economics and Engineering Mechanics

Your position: Professor

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Usually I outline my paper or article or report. Compare with my co-author’s outline. Come up with one we can both live with. Then split up subjects so we each have a piece.

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

Yes, sometimes we do a joint outline at that time.
3. On a scale of one-ten, rank the importance of audience to your publication. Why?

10, you must address the technical capability of the audience to understand your work.

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

This centers around the development of the outline.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

Sometimes its done as a group., Sometimes each does own then we compare and compose a single one. Depends on how easy it is to get together for a length of time.

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

Sections of the outline

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

Usually write and speak
we get at the backboard [blackboard] while will make outline.

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

Handwrite at least the outline.

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

alone

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?
discuss, then combine
usually one of use in assigned the job of collating all revisions

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

After draft is complete, to chaotic otherwise

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

2 or 3 hours

6. Does this time differ if your co-author(s) is present? Please explain.

yes, shorter and we divide work and go off on our own to finish

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

Usually take a short break and come back. The idea is to get completely through and get a new complete draft out at one setting.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

can be all

2. What is a recurring revision problem in your papers? Please explain.

Usually getting the flow of ideas correct and logical English can be cleaned up often you get the flow right
3. Generally, how much emphasis do you place on revision? Please explain.

All lot. Usually 5 or 6 revision before it fit to publish

4. Does your co-author(s) revise your work, or is revision a group effort?

Usually assign to one author with other commentary

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

   Specialization determine co-author
   Male of female, usually grad students (23-30)

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

   Yes.
   Interchange vital to new thoughts

3. List the advantages of collaborative writing for you.

   No one know[s] everything

4. List the disadvantages of collaborative writing for you.

   Its slow

5. For convention purposes, how is the author who presents decided?

   Who has time to take a trip to a useless long meeting
6. How is the order of the author listing decided?

Alphabetically by last name

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?
RESPONDENT #8
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Group writing involving several persons

Background:

Your age: 35

Your sex: M

Your area(s) of specialization: Petroleum Engineering Enhanced Oil Recovery Research

Your position: Manager Research Institute

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Yes, both the abstract and the plan of the writing are discussed with coauthors.

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

Most of the discussion centers on the outline and the format of the publication. Details can be left for final review.

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

9. Because you have to write differently for a different audience.

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.
Yes. Outline and content in a very general form are discussed before writing as a group.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

Usually developed as a group. But as I am more experienced than most of my coauthors (graduate students) I usually win. Outline is usually followed very closely.

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

By chapters if needed. For short publications we [ ] drafts and the others review and comment.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

We write the outline and think about it at the same time

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

type it in a computer

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

both ways, It depends on the coauthors

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

discuss with coauthors that is part of teaching.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

After the draft is complete
5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

I like to do the draft at once (several times) then the review process can be done in about 1/2 hr/day rate

6. Does this time differ if your co-author(s) is present? Please explain.

Yes It depends on their resistance specially in the draft stage.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

I stop and do something else., Then I come back to it

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

All three it depends how I feel about the paper

2. What is a recurring revision problem in your papers? Please explain.

English grammar, [ ], format, graphs.

3. Generally, how much emphasis do you place on revision? Please explain.

A lot. It determines the final stage. The paper has to be professional

4. Does your co-author(s) revise your work, or is revision a group effort?

It goes back and forth between co authors

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

Area of specialization, peer review explain
2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

Not really but experiencing their comments help.

3. List the advantages of collaborative writing for you.

Reduce mistakes
provides extra input
saves time and effort

4. List the disadvantages of collaborative writing for you.

too much attention to detail
tend to be time consuming with students

5. For convention purposes, how is the author who presents decided?

I tell him. Usually students present

6. How is the order of the author listing decided?

by amount of technical work preferred

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?
RESPONDENT #9
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

An opportunity to publish a greater variety and quantity of technical research

Background:

Your age: 66

Your sex: M

Your area(s) of specialization: EOR, fundamentals of flow and displacement in porous rock, heterogeneity of natural materials

Your position: Senior Scientist

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Yes. Sometimes with, sometimes without - depends on which of us has contributed most to the particular work.

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

It's hard to distinguish such meetings from those which take place anyway, about the ongoing research. Certainly any such meetings are quite informal.

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

Our perceived audience - the readers of the publication, have to be considered #10 [highest in importance]. After all, we write to make our ideas understood and of significance in further work. Of course - we rank ourselves as part of that audience, and write as a record, for ourselves as well.
4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

No such formal activities are usually engaged in.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

When I am principal, or when I am helping a student, I usually write a first outline, and then seek participation

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

Occasionally a conscious effort is made to make such a division. Usually, though, one of us is principal authors, and may write most of it and then seek help with the rough spots and collaboration where more appropriate.

But it depends very much on the technical aspects of the work itself, and who has done what.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

There are so few 'group conferences' on the subject of writing, itself, that I can't answer.

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

For the past five years or so, type it into computer. Sometimes, when computer's not available, parts of a paper get hand-scribbled.
2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

Alone - these sometimes in the office, sometimes at home.

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

We discuss revisions, but usually we revise - or try to clarify - each other's work. What one author has written, another tries to clean up.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

Usually after the draft is complete. We're fortunate to have a technical editor in our group who can make final suggestions on sentence structure and clarity and a lot of smaller revisions usually take place after we get this work back.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

Depends on what else needs to be done, & on how close is the deadline! Sometimes 10 or 15 minute pieces of time are all we can manage, & sometimes a writing session will go on for half a day or more.

6. Does this time differ if your co-author(s) is present? Please explain.

Usually the coauthors are together only during the final revision, and in this case, we can get the final touches make more rapidly.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

There's always something else to do - sometimes it is even relevant, and helps in the un-frustrating process.
Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

I guess I've already told you a lot about the revisions. Most are in cleaning up sentences, but paragraphs and sections occasionally have to be changed drastically if it becomes apparent that they're not doing what we want, in the way of getting out the information.

2. What is a recurring revision problem in your papers? Please explain.

I'm overly inclined to use pet words & phrases, like however, nevertheless, on the other hand!

3. Generally, how much emphasis do you place on revision? Please explain.

We think it's very important to base the revisions on how well our readers can understand the material. If they have questions, we'll try hard to phrase our sentences (& paragraphs) so as to communicate our results clearly.

4. Does your co-author(s) revise your work, or is revision a group effort?

The co-authors usually all contribute to the reading and revision.

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

The things I write are technical papers, & occasionally pieces of other things. When there is a coauthor it's because he or she can contribute, or because I want them to participate. Most of the them are younger than I, and both male & female
2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

One can learn by teaching - it helps a great deal, sometimes, to have coauthors. But there are many considerations, and each case is looked at separately.

3. List the advantages of collaborative writing for you.

- Making possible greater variety & quantity of publications
- Helping to develop junior scientific workers who can help me in my own research.

4. List the disadvantages of collaborative writing for you.

- Sometimes takes more time -
- Sometimes is too restrictive in terms of content -
- I hesitate, these times, to unduly force others to be held responsible for what might be considered too far afield.

5. For convention purposes, how is the author who presents decided?

Usually, on the basis of who did most of the work. But how well they can do the presentation is considered, as well.

6. How is the order of the author listing decided?

On the basis of who did the major part of the work.

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

That's enough for now!
RESPONDENT #10
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Working w/ other faculty members on research

Background:

Your age: 35

Your sex: M

Your area(s) of specialization: Petroleum Engr. EOR, 2 phase flow, formation evaluation, geological modeling

Your position:

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

No

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects(audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

No - we know our audience before we begin

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

7 - a waste of time to write at a level that is inappropriate
   - communication will fail.
4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

No

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

people who are closely involved with a particular section writes that section- It is a matter of who happens to have more time at that period.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

speak - the written ideas are put in drafts & discuss them

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

computer

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

alone

sit at computer - type, print - revise a few times & give to co-author (or get draft from co-authors)

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Both
4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

after complete
-Normally 5 total revisions before I am comfortable w/ paper.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

2 hours

6. Does this time differ if your co-author(s) is present? Please explain.

always alone

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

put it aside & do something else

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

all- early revisions on sentence level- later revision on paragraph & then sentence level

2. What is a recurring revision problem in your papers? Please explain.

None

3. Generally, how much emphasis do you place on revision? Please explain.

alot- first drafts are a "garbage dump" - a way to get all of the ideas down-

The paper is written through revision
4. Does your co-author(s) revise your work, or is revision a group effort?

co-authors revise

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

[area of specialization determine with whom]

- sex & age are irrelevant-
I co-author with someone that is interested in the same things & that I get along with. Otherwise I am not a co-author with them

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

To the extent that they contribute to the paper it is beneficial

3. List the advantages of collaborative writing for you.

I don’t have to do all of the work
Two heads can make a paper more readable

4. List the disadvantages of collaborative writing for you.

time to coordinate

5. For convention purposes, how is the author who presents decided?

whoever is going

6. How is the order of the author listing decided?

primary contribution if unequal contribution
rotation on paper if equal contribution
7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

I do not collaborate unless there is a good reason, ie the person can make a significant contribution and we get along.
RESPONDENT #11  
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Background:

Your age: 59

Your sex: M

Your area(s) of specialization: Petroleum Production Engineering

Your position: Professor

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Yes - with co-author(s)

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

Cover 1. objective of paper

2. what tasks each author will cover

3. lay out time schedule

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

important - governs the form of the publication
4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

No - this is done before the prewritting step. We usually have done the brainstorming long before writing is considered.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

outlines - yes
as a group

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

principle author decides

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

Generally - I have been the principal author and taken the leadership in organizing thoughts.

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

computer

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

Alone

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

discuss with co-authors -
generally make our revisions but consider co-author’s input.
4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

I revise both during writing and after draft

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

4 hrs/day when active.

6. Does this time differ if your co-author(s) is present? Please explain.

mtgs with co-author generally about 30 minutes each.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

set aside for a day.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

sentence - paragraph - section
in that order sentences most frequently

2. What is a recurring revision problem in your papers? Please explain.

recurring revision goal -
make the paper more clear.

3. Generally, how much emphasis do you place on revision? Please explain.

Important - I spend almost or much time revising or writing.

4. Does your co-author(s) revise your work, or is revision a group effort?

I do it - with comments from co-authors - sometimes I delegate the revision to the co-author.

General Questions:
1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

Most of the co-authors have been students. Male - 25-30 yrs. Pet. Engrs.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

Yes - Brings out concepts differently, and a new perspective.

3. List the advantages of collaborative writing for you.

End result is usually more [ ] and more readable.

4. List the disadvantages of collaborative writing for you.

takes a little more time.

5. For convention purposes, how is the author who presents decided?

If the work is a result of research, I have my students present.

6. How is the order of the author listing decided?

1. I list my students first - me last.

2. Otherwise in the order of the level of contribution to the work

3. Alphabetical

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

No
RESPONDENT #12
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Collaborative writing to me means that 2 or more people jointly contribute to the preparation of a written manuscript, report, etc. The contribution of each author may be in the form of experimental data, mathematical derivations, technical knowledge or actual composition.

Background:

Your age: 42

Your sex: Female

Your area(s) of specialization: Enhanced Oil Recovery

Your position: Research Associate

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Yes, I usually consider the format and range of information to be included. I have done this both with and without my co-author depending on the type of contribution the co-author is supplying and on the degree of collaboration. For instance, manuscripts that are prepared in conjunction with an administrator or other higher authority are usually presented to that person for their comments after I have written a first draft.

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

- see comments in part one
When preparing a manuscript with one or more students, I frequently discuss the content of a manuscript before I begin preparation. We usually discuss the experimental data that will be presented and determine what conclusions can be drawn from the study.

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

All of my written manuscripts and reports have been aimed at a knowledgeable audience. I have given oral presentations to students (both graduate & undergraduate) and realize that you need to tailor your material to your audience.

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

I have not participated in specialized techniques such as brainstorming, but I have found it very helpful to have intense discussions concerning experimental data and deductions before writing. These discussions usually include the people who participated in the project, whether or not, they will be listed as co-authors.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

I prepare very informal outlines for my own use.

6. How is work divided among the authors(paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

The divisions of labor is usually suggested by the main author. I have seen the labor divided several different ways. For certain large reports that cover several topics, co-authors usually write the section concerning their area of expertise. Other times, one individual may write the report using data contributed by another individual (usually a student).

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

We make notes of points as they are brought up in the discussion.

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?
Type it into a computer.

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

I write alone. Usually I gather the information that I intend to include and organize it before writing. I then write the introductory material and data presentations sections before writing a conclusion section. I sometimes make rough outlines before writing a particular section.

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

I do both. I generally write the paper, make my own revisions and then discuss further revisions with my co-author(s).

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

Major revisions are made as I write and when I discuss the draft with my co-author(s).
For most papers, I revise as I write, prepare a first draft, wait a few days, reread the first draft and make further revisions. I then give the second draft to my co-author(s) for their comments. Frequently, the revisions are relatively minor; however, there have been some cases where major revisions were made at this stage.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

I usually try to devote as much time as possible, to a publication until it is finished. I find this is most productive since I don't lose my train of thought between writing sessions.
6. Does this time differ if your co-author(s) is present? Please explain.

I usually work alone when I am writing. Meetings with co-authors to discuss a paper will depend on the co-author(s) schedule.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

I take a short break. If there are no deadlines, I may set the paper aside for a week or two and work on another project. After writing the first draft, I usually set it aside for at least a week, before revising the draft.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

I have revised at all these levels. If I am extremely famil[i]ar with the material I am presenting, most revisions will be in wording. When I am less familiar with the material or have difficulties expressing what I want to say, I revise more frequently on the paragraph & section level.

2. What is a recurring revision problem in your papers? Please explain.

I have two types of problems that generally require numerous revisions. I have difficulties in expressing myself when I am writing sections of proposals that are intended to capture interest in a project and secure funding. In addition, I find it difficult to write reports or manuscripts on topics outside of my main areas of interest (ie topics that are less familiar to me)

3. Generally, how much emphasis do you place on revision? Please explain.

I think revisions are extremely important. In writing a technical paper, you may see the data in a different light and alter your conclusions. Revisions in a proposal may mean the difference between receiving or not receiving funding.
4. Does your co-author(s) revise your work, or is revision a group effort?

Usually, the co-author makes revisions, then we discuss any revisions that I don’t feel are correct.

**General questions:**

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

   I have felt comfortable with all of my co-authors regardless of sex, age, or area of interest.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

   I feel that writing with my peers is beneficial since it allows us to incorporate different viewpoints into the text. It also helps in making the wording more clearly express our views.

3. List the advantages of collaborative writing for you.

   It brings more than one viewpoint to the topic.

   The ideas are expressed more clearly, and misunderstandings of the text are limited.

   It allows more scope especially when authors have different areas of expertise.

   Discussions of experimental data and conclusions helps to weed out misinterpretations of data and false conclusions.

   When each person is responsible for one section, the workload on any one person is reduced.
4. List the disadvantages of collaborative writing for you.

I have felt cheated when someone co-authors a paper in name only (i.e., their name is placed on the paper for "political" reasons but the person does not significantly contribute to the paper).

I have noted few disadvantages if every co-author contributes something to the publication. The only problems have been delays in publication when one collaborator moves far away or becomes involved in another project.

5. For convention purposes, how is the author who presents decided?

Several matters have been taken into consideration. The familiarity of the person with the project as a whole (generally the person who makes the biggest contribution presents), the ability of a person to attend a meeting and the speaking ability (i.e., language ability) if the person's native language is not English.

6. How is the order of the author listing decided?

Usually in order of degree of contribution unless "political" reasons intervene.

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

I find it very useful for an editor to check the paper for grammatical & spelling errors.
RESPONDENT #13
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Background:

Your age: 45

Your sex: M

Your area(s) of specialization: Reservoir engineering

Your position: Professor

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Yes, usually without co-author initially

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

Sometimes, we will discuss content, who will write outline, first draft and/or sections, length, timing and other matters, but often not in detail, but rather only generally.

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

ten
Because the background and interests of the audience must be considered to decide how to effectively communicate with them.
4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

This is done some of the time. Usually only two or at most three authors participate at any one time. The more experienced and active writers take the lead.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

I use an outline only as a starting point for the first draft. I prefer to prepare it myself or to have a co-author prepare it or his or her own and then discuss it. This is more efficient and avoids lengthy discussions on issues which can be dealt with more effectively after a coherent outline from one person is available.

6. How is work divided among the authors(paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

When a supervising professor and a student are co-authors, the professor usually decides these questions because he or she is more experienced. Another consideration is the expertise of co-authors e.g. one covers the experimental section, another one the theoretical section. To a lesser extent, time and motivation dictate who writes which sections.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

Usually an open discussion occurs i.e. very informal, with anyone speaking who wants to. We will often examine available resource material e.g. a report, thesis, the literature, books, notes, lab. data, computer printouts, plots, computer codes, etc., whatever is pertinent

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

type into a computer

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.
Usually alone, but there are significant exceptions.

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Both

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

Normally revisions occur after draft is complete.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

two hours

6. Does this time differ if your co-author(s) is present? Please explain.

It takes much longer if a co-author is present.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

Usually I wait until the next day if the deadline allows me to do so.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

When a paper (report, etc.) is much to long, then the revisions start on a section level and work down since it is inefficient to revise sentences which may be deleted anyway if a whole section must go to reduce length otherwise, it depends on specific content, type of document, co-authors, etc.

2. What is a recurring revision problem in your papers? Please explain.

They are often too long and wordy. My sentences are often too long or complex. I usually do not even attempt to punctuate accurately until the final draft.
3. Generally, how much emphasis do you place on revision? Please explain.

I place very high emphasis on revision since my papers can be improved a lot by going through 2 or 3 drafts.

4. Does your co-author(s) revise your work, or is revision a group effort?

I solicit suggestions from co-authors and usually one or two others who are good at writing and make good suggestions, then I make the revisions or my co-authors might do so, but usually not both. This is to avoid logical or stylistic inconsistencies.

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom you write? Please specify co-author by sex, age, and area of specialization. (No names please).

   I have co-authored papers with a wide variety of people (all ages, both sexes, different disciplines, organizations, nationalities, etc.) The only requirement is that they have something worthwhile to contribute and the time to do so.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

   Yes

3. List the advantages of collaborative writing for you.

   Clarity is improved.
   Mistakes are more likely to be found.
   Technical expertise is added in most cases.
   Less time is required in some cases.
4. List the disadvantages of collaborative writing for you.

Excessive discussions and revisions may occur if authors are not comfortable and flexible.

5. For convention purposes, how is the author who presents decided?

Various consideration depending on people involved eg. availability at time, speaking ability motivation, cost(travel), who contributed most to research and paper.

6. How is the order of the author listing decided?

The person who did the most work goes first e.g. the student research assistant goes before his supervising professor normally.

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

It is a lot easier and faster now with computers, electronic mail, fax copies, etc.
RESPONDENT #14
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Background:

Your age: 39

Your sex: M

Your area(s) of specialization: Drilling Engineering

Your position: Associate Professor

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

without

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

No

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

8

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

No
5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

- my own
- Follow format of Publication Journals

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

I do most of work
co-authors do the graphics.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

Handwrite

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

-Alone
- Follow Journal format

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Yes.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

both.
5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

1 hr. a day.

6. Does this time differ if your co-author(s) is present? Please explain.

No

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

Yes, I take a coffee break.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

on paragraph

2. What is a recurring revision problem in your papers? Please explain.

clarify the nomenclature.

3. Generally, how much emphasis do you place on revision? Please explain.

not much.

4. Does your co-author(s) revise your work, or is revision a group effort?

Yes.
General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom you write? Please specify co-author by sex, age, and area of specialization. (No names please).

None

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

I never had a chance to work with others. Mainly I am the author.

3. List the advantages of collaborative writing for you.

none

4. List the disadvantages of collaborative writing for you.

takes long time to accomplish goals.

5. For convention purposes, how is the author who presents decided?

one who does the most work

6. How is the order of the author listing decided?

most work is the author

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

None
RESPONDENT #15
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Co-authoring technical papers or books

**Background:**

Your age: 47

Your sex: M

Your area(s) of specialization: Formation Evaluation

Your position: Professor

**Prewriting:**

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

No. I usually formulate an outline in my mind.

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

My co-authors are usually graduate students writing on their research findings. We agree on the topic of the paper and the content. They draft an abstract that we finalize is such meeting. They proceed in their own putting together a first draft that I put in the final form.

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

10
4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

No.
The topic and content of the paper is to a large extent predetermined by the research.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

Usually, I do not use an outline.

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

The co-author writes a complete draft. The draft is then reviewed, improved on, etc. by the other co-author.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

I speak, they listen.

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

Handwrite. use of a typ[e]writer or a computer hinders free thinking.

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

I write alone.
Quiet office where I have the references I need. Writing sessions last usually couple of hours.
3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Yes. Usually to explain to them the purpose of these revisions.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

After the draft, prepared by one of the co-authors, is ready.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

Two hours on average.

6. Does this time differ if your co-author(s) is present? Please explain.

Yes. It is much shorter. Basically, I can co-author a paper but I can not write it with someone else present. Co-author physical presence inhibits free thinking

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

A coffee break is enough. Any inter[rupt]ion longer than few hours or days results usually in abandoning the manuscript. I might start anew later on, however.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

All of the above. We revise what need[s] to be revised. Most of the time, however, the revisions are on sentences.

2. What is a recurring revision problem in your papers? Please explain.

No particular problem stands out.

3. Generally, how much emphasis do you place on revision? Please explain.
Minor revisions are important. Major revisions are, however, a sign of disorganized writing and is discouraged.

4. Does your co-author(s) revise your work, or is revision a group effort?

Preliminary revisions are performed individually. The ultimate revision is a group effort.

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

My co-author is usually a typical petroleum engineering graduate student, generally a 24-28 year old male.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

Writing paper with graduate students is part of the learning experience. It is beneficial to them and to the paper.

3. List the advantages of collaborative writing for you.

Collaborative writing usually stimulates the process itself. I get more done that way.

4. List the disadvantages of collaborative writing for you.

None. Oops, I take that back. It is usually a challenge (not truly a disadvantage) to get someone to write what I have in mind.

5. For convention purposes, how is the author who presents decided?

The graduate student presents the paper as part of the learning process.
6. How is the order of the author listing decided?

Graduate student first

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

Yes.
I personally do not believe in collaborating on textbooks or other documents that convey a certain philosophy.
Collaborative writing is o.k. for technical papers especially in the teacher/student context.
RESPONDENT #16
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

Joint production of a paper with co-authors-

**Background:** Adjunct Professor, U.T., Pet Eng Dept, past 15 years; previously 30 years in research dept of major oil co-

Your age: 73

Your sex: M

Your area(s) of specialization: Petrophysics, exploration geophysics, petroleum economics, well logging.

Your position: Adj. Prof.

**Prewriting:**

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Most of my writing begins with a handwritten draft which is then typed and revised by me, and after getting suggestion from my co-authors.

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

Yes. There is generally an understanding of the audience & technical journal we are aiming for before the research begins, long before we start writing the paper. We usually decide on who will write up each section of the paper based on background & interest of the co-authors. Each co-author reads & contributes to final version of the other co-authors. This final version usually requires one or two rewrites before we are satisfied with it.

3. On a scale of one-ten, rank the importance of audience to your publication. Why?
8. Writing is communication. Technical writing attempts to communicate technical matters to the readers, and the background, vocabulary and interests of the readers must be kept in mind if the communication is to be successful. On your scale, 9 would be accuracy, and 10 would be significance of results.

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

I don't think I would call it brainstorming. We all know pretty well what we want to get across to the reader by the time we begin to write. We do discuss what we want to emphasize, conclusions, and recommendations before we begin writing.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

In general, I don't use an outline. I do generally try to write an abstract first (usually revised several times before paper is finished), followed by other sections as seems appropriate to paper's contents.

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

Usually decided in consultation before we start writing. The division of effort may change as the paper is written. Very often more work is decided on to nail down questionable points before the paper is finished.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

Usually we have reviewed each others efforts on the various sections, and make suggestions & revisions as we take up those sections & discuss each in turn.
Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

Handwrite

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

Alone

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Both-It is usually impossible to catch all your own mistakes.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

Both-Several "revision" sessions usually occur.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

30 minutes--2 hrs.

6. Does this time differ if your co-author(s) is present? Please explain.

Writing is usually done alone, the sessions with the co-authors are mostly verbal, unless the corrections are easily made-grammar, spelling, elimination of jargon, etc.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

I almost never take a "coffee break" & return to the paper after 15 or 30 minutes. Usually I need to think about the problem overnight or longer.

Postwriting:
1. Are most revisions on a sentence, paragraph, or section level? Please explain.

It could be any of these.

2. What is a recurring revision problem in your papers? Please explain.

It is easy to make a paper too long. You have to explain the ideas clearly but concisely. Good figures help a lot.

3. Generally, how much emphasis do you place on revision? Please explain.

Revision is part of the writing process. It would be unthinkable (and probably unreadable as well) to stop at a first draft.

4. Does your co-author(s) revise your work, or is revision a group effort?

A group effort.

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

The expertise & technical interests usually indicate who your collaborators might be. It helps if they are also good communicators.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

It is beneficial, because "two heads are better than one." Even when I have no co-author, I always ask several people knowledgeable in the field to read the paper critically before I submit it.
3. List the advantages of collaborative writing for you.

In general, I think it produces a better paper. Each author can discuss what he knows best & is most interested in. It’s also less work when the sections are parcelled out.

4. List the disadvantages of collaborative writing for you.

It probably takes longer to write, on the average. Maybe because it is more extensively revised.

5. For convention purposes, how is the author who presents decided?

(a) Best speaker  (b) who is going to convention (c) most senior (best known technically) author- (d) toss a coin

6. How is the order of the author listing decided?

Author who did the most work listed first.

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

I would like to plead for more careful & clear technical writing. Even after referees review the paper, too many have one or more fairly obvious errors, and God knows how many obscure ones. Jargon should be used only where absolutely necessary, and defined when it is used. Authors should remember their objective is to explain, to teach, to communicate, not to impress with specialized vocabulary and explanations that leave out one or more key steps. None of us succeed in this, but we should all try harder.
RESPONDENT #17
Collaborative Writing Questionnaire

Before beginning this questionnaire, briefly define what the term collaborative writing
means for you.

Sharing in the responsibility for producing a paper with students teaching them to orga[n]ize and package their material

Background: Chem Eng, Mineral Eng, Petroleum Eng.

Your age: 53

Your sex: M

Your area(s) of specialization: Petrophysics (Science, Engineering)
--A branch of petroleum engineering—multidisciplinary

Your position: Senior Scientist

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Yes
Varies from having lead author prepare paper to dividing paper in parts.
(In scientific writing the time required to write up work relative to performing expts. or project is minor)

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects(audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

Decision of where to publish/present is made during course of work—not at some specific meeting—
Unless publication is in response to specific invitation
3. On a scale of one-ten, rank the importance of audience to your publication. Why?

9. if funding is needed
4. if research is what researcher thinks is needed

4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

Mixed--many ideas come during joint writing--these are a main source of new papers.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

Try to--new outline develops as manuscript grows
Apart from obvious categories--theory, expt, etc. the outline often comes from reorganizing sections

6. How is work divided among the authors(paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

Group leader--choices are usually obvious for authors with limited writing skills (foreign students and visitors whose working language is not English) They may contribute more to obtaining data or will produce a rough draft as part of their training.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

Yes--at least with all coauthors that are trusted and respected--some shotgun coauthorship can be distasteful but are sometimes unavoidable, in such cases contact is minimal and there is no further collaboration.

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

Handwrite if good secretarial service is available--otherwise use P.C.

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.
Nearly always alone
With some authors a working manuscript is exchanged by mail (say for authors in other country) but final wording can be decided together.

3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Discuss—it would be unethical to make changes without keeping the other authors informed—exceptions are where other authors have stated that the author making the revisions is free to deal directly with publisher/editor—for example graduate students will normally be happy to leave publication details to prof. if they have moved on.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

ALL THE TIME
Most revisions occur before submitting paper or preparing etc. others may be in response to reviewers comments

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

1 1/2 hours +- 1 hr.--could be as much as 12 hours or even 15 in one day, if there is a deadline.

6. Does this time differ if your co-author(s) is present? Please explain.

Definite—if coauthor is from another institution hours may be very long if only 1-3 days are available.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

Put aside. Abandon—This rarely happens because most material is in place ont the paper writing starts. In most cases the writing process greatly [strengthens?] the paper by introducing new ideas and perspectives. The most common reason for putting the paper article or getting someone else to read it (or revise it) is that one is so immersed in the material that a "woods for the trees" syndrome develops. This is very common.

Postwriting:
1. Are most revisions on a sentence, paragraph, or section level? Please explain.

All levels especially of sections because reorganizing for some reason. Word processing has revolutionized revisions of manuscripts.

2. What is a recurring revision problem in your papers? Please explain.

Conformance to symbols and various units.

3. Generally, how much emphasis do you place on revision? Please explain.

Careful checks are made at the late stages of preparation. In general it is much better to rely on revisions to ‘smooth’ out the paper. Thus--there is a lot of emphasis.

4. Does your co-author(s) revise your work, or is revision a group effort?

Usually check independently except at galley proof stage.--Manuscript is usually cycled between authors.

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

Both sexes
All ages
Many specialties
Most coauthorship develops naturally and continue because the relationship is comfortable.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

Yes—Sharing and developing ideas is stimulating.
Coauthor may have different discipline and perspective.

3. List the advantages of collaborative writing for you.

Exchange of ideas
Discussions stimulate ideas.  
Workload is shared  
Meet people in other disciplines  

4. List the disadvantages of collaborative writing for you.  

Possible loss of specific identity with part of work but this is usually balanced where other author make the major contributions. Probably not helpful to a person seeking honors and prizes on an individual basis.  

5. For convention purposes, how is the author who presents decided?  

Usually the person most comfortable with the material and subject area of the paper. Communication-speaking skills are also important.  

6. How is the order of the author listing decided?  

By contribution or general agreement. Usually the person willing to write the first draft--the choice is usually obvious.  

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?  

(These answers apply to writing of scientific/engineering papers in general. After completing the questionnaire I noticed the phrase Petroleum Engineering Research Papers in bold print--perhaps the questionnaire is somewhat generic with respect to this category)
Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

A writing effort in which each author plays a significant role in the preparation of the finished paper.

Background:

Your age: 43
Your sex: M
Your area(s) of specialization: Enhanced oil recovery, phase behavior
Your position: Prof. of Petroleum Engineering

Prewriting:

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Yes. I sit down with coauthors, and we work out a detailed outline an a list of illustrations and tables.

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

See previous answer.

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

1—highly important.
We choose the journal based on the audience we want to reach.
4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

That is done in the research stage. We write when we have research results to report.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

As a group. -- pretty closely, though sometimes material gets reorganized a bit.

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

It varies. If the student is the first author then I ask them to write a full first draft. Then I edit it, and we discuss it before undertaking another round of rewriting and editing.

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

With overseas coauthors, I use electronic mail.
With local ones we meet and discuss.

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

Both.

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

Alone. --It doesn’t work to write first drafts in groups. Final editing is often done in groups of two.
3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

I suggest and then we discuss.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

Usually after a draft is completed.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

Varies tremendously depending on deadlines and other factors. Best results are obtained when I can spend 4 hours or more at once working on a paper.

6. Does this time differ if your co-author(s) is present? Please explain.

No.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

For me, the greatest frustration comes when I cannot spend enough time in a row on a paper due to the poss[?] of other responsibilities.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

Mostly at the sentence level, at least if the outline was done well.

2. What is a recurring revision problem in your papers? Please explain.

Lack of knowledge of basic grammar on the part of engineering students. Students often have trouble with transitions from one idea to the next.
3. Generally, how much emphasis do you place on revision? Please explain.

Plenty. This is the stage where the ideas are crafted into clear, concise English expression.

4. Does your co-author(s) revise your work, or is revision a group effort?

All of the above.

**General questions:**

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

   No.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

   Occasionally.

3. List the advantages of collaborative writing for you.

   It is an opportunity to teach students how to write a high quality technical paper—an important skill.

4. List the disadvantages of collaborative writing for you.

   It is always slower than doing it myself.

5. For convention purposes, how is the author who presents decided?

   If the student is available, he or she does it. I don’t need any more practice, and the student benefits from the preparation and delivery.
6. How is the order of the author listing decided?

If the work described is student research toward a degree, the student is always listed first. If it is a review paper, with some student help, I may be listed first or not depending on who did the most work on the manuscript.

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?
Before beginning this questionnaire, briefly define what the term collaborative writing means for you.

The kind that I hate: One guy does the work and 3 to 5 more sign.

**Background:** Engineer

Your age: 65

Your sex: M

Your area(s) of specialization: Petr. Eng.

Your position: Teacher

**Prewriting:** ?

1. Do you make it a practice to engage in any preliminary writing activity? Does this occur with or without your co-author(s)?

Yes. With my co-authors, if any--

2. Before any writing occurs, do you meet with your co-author(s) to discuss the various aspects (audience, organization, content, etc.) of the publication? Briefly describe one such meeting.

Yes we do--
We write an abstract
Plan of the paper
Assign work (!!)--

3. On a scale of one-ten, rank the importance of audience to your publication. Why?

I guess that you mean, conference, symp. workshop etc.--or Journal’s name. The "audience" then should be scaled 8.
4. Do you and your co-author(s) participate in any prewriting techniques such as brainstorming before you begin to write? Is this done together as a group or separately? Please explain.

Of course.
First individually, then we compare in a general brainstorm.

5. If you use outlining as a prewriting technique, is the outline developed as a group or on your own? In general, how closely is the outline followed?

Outline developed by each author then a consensus during a meeting. After outlined is followed rather closely unless something unexpected occurs during writing.

6. How is work divided among the authors (paragraphs, chapters, sections)? Who decides on these divisions? Please explain.

No less than chapter or section for each author--
General consensus.
Impossible to have any style [ ? ]

7. In the group conference(s), do you and your co-author(s) write or speak as you all organize your thoughts? Briefly explain your answer.

No. each one writes his part and submit it to others--

Writing:

1. Do you generally handwrite your draft(s) or type it into the computer?

   type into computer.

2. Do you write with your co-author(s) present, or do you write alone? Briefly describe one of your writing sessions either as a group or alone.

   No, alone
   Just seat down at the computer with the outline and documents and write.
3. Do you discuss revisions with your co-author(s), or do you make your own revisions?

Revisions must be discussed with co-authors.

4. Does revision normally occur during the writing stage or after your draft is complete? Please explain one such instance.

Both.
During writing each section and after the work is complete--Mostly to harmonize concepts and styles.

5. Approximately how much time do you spend, with or without your co-author, working on your publication at one time? Example: 30 minutes a day.

Alone, 1/2 hr to 2 hr per session, no more--Several session per week.

6. Does this time differ if your co-author(s) is present? Please explain.

Co-authors must prepare their part Betts[?] read what they have done, correct or suggest and then meet.

7. What do you do when you become frustrated with the paper you are working on? For example, do you take a coffee break, or do you put the paper aside for any length of time? Please explain.

Never get frustrated, just tired. Go to bed and start over or continue next day.

Postwriting:

1. Are most revisions on a sentence, paragraph, or section level? Please explain.

Sentence
Sometimes paragraph.
Rarely a whole section.

2. What is a recurring revision problem in your papers? Please explain.

Never heard of it.

3. Generally, how much emphasis do you place on revision? Please explain.
Very important
a paper must be perfect

4. Does your co-author(s) revise your work, or is revision a group effort?
Both. First everyone revise everyone else--then group meeting.

General questions:

1. Is there one or two authors you feel more comfortable with, or does your area of specialization determine with whom your write? Please specify co-author by sex, age, and area of specialization. (No names please).

Of course, you do not want to write with the guy you cannot stand--No discrimination, just a question of affinity.

2. Do you find that writing with your peers is beneficial to your writing or to the paper you are working on? Please explain.

Sometimes beneficial
Sometimes a pain in the neck.

3. List the advantages of collaborative writing for you.

None, hate it.

4. List the disadvantages of collaborative writing for you.

You ever have collaborative mercenary writing
You write and do not get your name on the publication, it happen to me once.

5. For convention purposes, how is the author who presents decided?

The guy who like to go to meetings, the guy who talks best, or the boss.
6. How is the order of the author listing decided?

In industry hierarchical order—in academia sometimes professor first, most of the time, as it should main author generally it is a group decision—the personality of the authors plays a role in the choice—But it should be the main contributor whatever its' rank.

7. Is there any aspect of your collaborative writing process not previously mentioned you would like to note?

I still hate it.
VITAE

Michael Anne Coffey resides in Baton Rouge, Louisiana. She is Editor-in-Chief of the Louisiana State University (LSU) Center for Coastal, Energy, and Environmental Resources. She received her B.A. in English Literature from LSU and is currently completing her M.A. in English from LSU, with emphases in Technical Writing, and Rhetoric and Composition.
Candidate: Michael Ann Coffey

Major Field: English

Title of Thesis: Collaborative Writing in Petroleum Engineering: A Case Study of Petroleum Engineers in an Academic Setting

Approved:

Malcolm Richardson
Major Professor and Chairman

Daniel Fogg
Dean of the Graduate School

EXAMINING COMMITTEE:

Carol Matteidy

Seth Brown

Date of Examination:

22 June 1993