

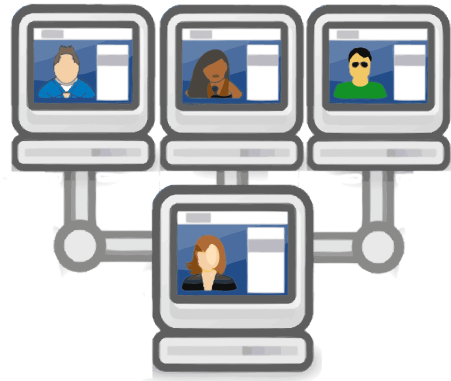
# Leading Remote Writing Teams

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ENGL 350-K01

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Nov. 30, 2018



# Abstract

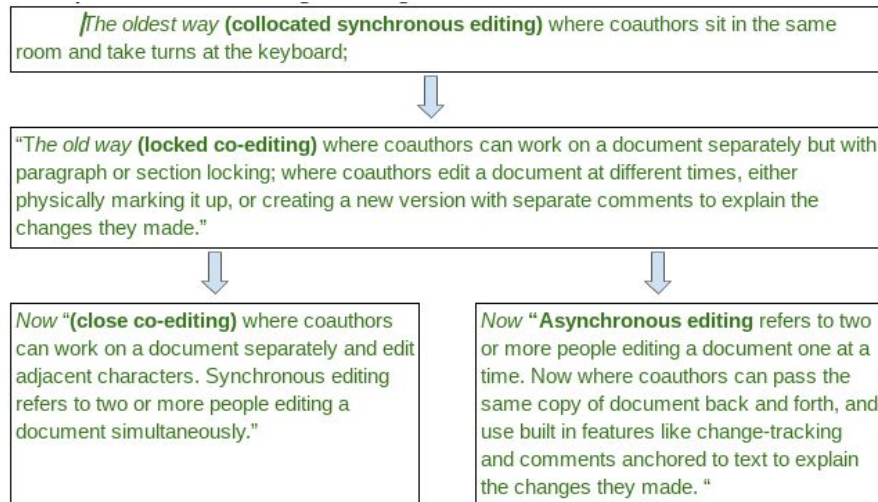
This paper will review recent research regarding the emergence of synchronous collaborative software (groupware), its effects on the dynamics of writing teams and the implications for remote project management. I will briefly go over the background and context, note unanswered questions, and outline a plan to answer them. I seek to maximize the quality of the document when writing in this unique environment, specifically coherence, consistency, flow, and focus. Writers are sometimes reluctant to fully utilize the synchronous functionality of groupware, leading to poor integration of unique information shared with the group. Instead of working closely together on a document, collaborative writers frequently rely on the “divide and conquer method. Despite the complications of relying on this method so heavily, it doesn’t look to be going anywhere soon, and it has its place. So it makes most sense to focus on maximizing the synchronicity of the writing while working with this method. Those interviewed in one study commonly referred to the leader as the facilitator of a number of functions that are essential to integration but found to be deficient in asynchronous communication, collectively known as convergence (Mehlenbacher) (). One paper concluded that it was uncertain whether the presence of a leader led to greater quality or if there were confounding variables (). In order to answer this question and discern best practices when leading a collaborative remote writing group, I propose two experiments, an observational study and interviews.

## Background and Context

According to “Why Users Do Not Want to Write Together When They Are Writing Together: Users’ Rationales for Today’s Collaborative Writing Practices” by Wang, “It is important to note that *the ways these terms are used have changed in literature over time*” (Wang, 2). Wang explains that originally writers worked together simply by sitting in the same room and taking turns, a form of synchronous writing. Obviously this would involve close communication and input from other members, leading to a well coordinated and integrated writing. Later a form of asynchronous writing emerged as writers started to put “their” sections off limits while working separately, adopting a division of labor method, and required that either only comments be made or that the original be left untouched (Wang, 2017). This furthered the divide between writers. From this evolved both synchronous and asynchronous writing as we know them today (Wang, 2017). With asynchronous writing, the work is still passed back in forth, with the main change being that writers can track changes and leave electronic comments (Wang, 2017). This is not much different from the old way. Synchronous writing diverges from “the old way”, locked co-editing, much more by allowing writers to work together on the same document simultaneously (Wang, 2017). This is revolutionary and can be expected to change writing dynamics quite a bit while also perhaps bringing back the close collaborative efforts that were lost when we switch from the oldest way, collocated synchronous editing (Wang,

2017). In *How People Write Together Now: Beginning the Investigation with Advanced Undergraduates in a Project Course*, Olson et al ask whether there “are there new ways of working” in this novel dynamic (Olson, et al, 6).

History of collaborative writing according to *Why Users Do Not Want to Write Together When They Are Writing Together* by Wang, et al (2017), page 4.



## History of how perceived or represented

Understandably, people were reluctant to use groupware to write differently than they always had. According to Wang, “As for users’ perceptions around synchronous co-editing in the real world, Brodahl et al. surveyed college students about their perceptions of collaborative writing using web-based technologies (e.g., Google Docs) [9]. Only 13.9% of their 166 participants reported that they were motivated to use the tools for collaborative writing, and 70.5% of them felt the tools were not working as expected). The researchers did not explain why people had such perceptions” (Wang et al, 4). They were by then used to their adopted method of writing asynchronously and it worked for them.

As the years went by, writers did become more acclimated to groupware and the new ways of writing, but there is still resistance to this day. People working in a group using groupware have been found to fall back on an approach that seems designed to minimize collaboration, the old way of “divide and conquer” method, to which they have become accustomed (Wang, 6).

This shift between different writing styles, from working closely, to dividing up work, to uncomfortably moving somewhat back towards writing together while clinging to the old ways, is perhaps a reflection of social trends in how we relate to one another and how comfortable we are when it comes to working with other people. Perhaps it is a fear of working closely with strangers. Have we become less comfortable with it, or are we

working with more strangers as the workplace becomes increasingly fast paced and globalized?

Undoubtedly this change is connected with the advance of technology. The advent of computers and, more importantly, the internet, has not only made it easier to work apart, but also conditioned many to prefer it, only to then take away our excuse for it with the introduction of programs that allow multi-user editing in real time.

Not surprisingly, one communication channel which has created a greater distance between people in society and become a common avoidance mechanism, instant messaging, has had a similar effect in the world of writing (Mehlenbacher, 2018) (Münzer et al, 2009). This is a feature that has emerged on group writing platforms which is likely to be more frequently used to compensate for and further enable the lack of face to face communication that persists even as users begin to embrace the synchronous work groupware facilitates. Utilizing these built-in features allows users to send messages in real time while working, known as parallel communication (Münzer et al, 2009). This term is more precisely defined by Bridging The Gap as “the number of simultaneous conversations the medium allows” (Münzer, 79). You would think that this would lead to increased cooperation resulting in greater cohesion and coherence throughout the document. Unfortunately, however, too many simultaneous ongoing conversations will inevitably become disordered. Indeed, although parallel communication was found to increase the sharing of novel information by 50%, something essential for problem solving and brainstorming, Bridging The Gap notes that it is also “associated with incoherence and topic decay” (Münzer et al, 79). Münzer and Holmer warn that incoherence is problematic because it “will lead in turn to high cognitive load, which impedes the learning of information presented by other group members and the integration of these pieces of information with unique pieces of information” (Münzer et al, 80). So this means incoherence in communication negatively affects the efficiency of the group, something which will surely manifest in the finished paper. When a group is working apart, each on their own sections, they may increasingly rely on features which facilitate parallel communication such as chat. This enables them to continue working apart in space on their own sections while perhaps communicating in real time in short unsustained bursts, only half-heartedly using the synchronous writing feature. The result is that information is not shared and understood uniformly across the group and so it is not put to use in a coordinated manner.

This resulting failure to integrate new information is why continued reliance on the divide and conquer is problematic. According to Bridging The Gap, “Integration of information requires that unique pieces of information are discussed, compared, and related to each other. We consider repetitions and citations of unique pieces of information as indicators of information integration. Repetition means that a unique piece of information is mentioned again by the member who previously contributed it (i.e., by the owner of that piece of information). Citation means that a member other than its original

contributor mentions that piece of information again later in the discussion” (Münzer, 82). When communication within the group is incoherent, each writer must work harder to continually keep track of, take into account, and interrelate the new information that is shared. This leads to a loss of focus and coordination, and inevitably incoherence results in the written work itself as ideas fail to articulate or build upon each other towards the main point. According to “Bridging The Gap”, “Asynchronous media characteristics decrease the coherence of the discourse and increase the mental effort of the participants. Since coherence and mental effort indicate that asynchronous media characteristics impede the information integration process, the higher engagement in information integration is interpreted as compensatory effort” (Münzer et al, 76). This quote is referring to asynchronous media, but because divide and conquer leads to asynchronous practices even when done on media that facilitates synchronous writing, the point is still relevant.

In one study, students said that they used the divide and conquer method despite the ability to simultaneously work on the entire document together because they all had different styles, but the author suspected they were using that as an excuse to avoid working together (Mehlenbacher, 206-207). Although the software supports synchronous writing, which according to “Bridging The Gap” would be marked by “individuals work[ing] together on the same activity at the same time; i.e. have a shared focus”, they are using it in an asynchronous manner (Münzer et al, 77). So something must be done to coordinate the group, ensuring that they work with a unified purpose towards a common goal.

Writers relying on the divide and conquer method often describe leaders as performing essential functions that facilitate these very things, by resolving conflicts, making final decisions, keeping members on the same page and focused on the same goals (Mehlenbacher et al, 2018) (Wang et al, 2017). In *Instructional Design for Online Learning Environments and the Problem of Collaboration in the Cloud*, Mehlenbacher et al warn that when collaborative tasks are fragmented, the question of leadership becomes one of coordination and management but even strong “leadership” in these assignments is discussed in terms of fragmented collaboration.” (Mehlenbacher et al, 207). So perhaps a leader's place is orchestrating and connecting people, ideas and novel information continuously as the paper is written, not after, facilitating communication. They do not write everything, however. Mehlenbacher and Olson note that a being the ‘leader“ does not necessarily mean being the head writer (Mehlenbacher et al, 214) (Olson, 14). In “How People Write Together Now: Beginning the Investigation with Advanced Undergraduates in a Project Course”, the researchers found that leaders were only the head writer 50% of the time (Olson et al, 2017). So what else does a leader do? Their essential role seems to be to moderate and direct the flow and use of information. All of this seems to be describing the process of convergence. Convergence is “the process of convergence (evaluating information, coming to a consensus about values, priorities, and interpretations)” (Münzer, 77). Accordingly, it has been suggested by one source, but left inconclusive, that the presence of a clearly defined leader leads to higher quality (Olson et al, 2017). They

suggested further research be done (Olson et al, 2017). But what would we look for and how would a leader promote quality?

I hypothesize that having a clear leader does lead to higher quality group-work, and that a leader does this by helping to coordinate the group, facilitating conveyance, convergence, and integration. I think if this were so, it would be because they are facilitating communication between other members and coordinating the writing process.

## Why it matters

As mentioned before, the internet makes it possible to employ a workforce from across the world and technical writing is becoming more globalized (Schnoll, 46). Because of this, writers will increasingly collaborate remotely with strangers. According to *Instructional Design for Online Learning Environments and the Problem of Collaboration in the Cloud*, “numerous studies also note that new teams that quickly come together to collaborate and then disperse quickly after the project is done maybe more the norm than the exception in “real” organizational contexts (Cho, Lee, Stefanone, & Gay, 2005; Nardi, Whittaker, & Schwarz, 2002). (Mehlenbacher et al, 211-212)”

We know from Media Synchronicity Theory that with writers who are unfamiliar with each other, convergence increasingly becomes an important aspect of the writing process on which to focus (Dennis et al, 2008). This is because their mental models are not yet synchronized (Dennis et al, 2008). Therefore, it seems that the primary function of a leader would be to facilitate the alignment of the group member’s mental model by setting a common goal and directing focus.

Collaborative writing systems, which facilitate remote collaboration, will become increasingly prevalent. Groupware is often used synchronously, meaning together at the same time but not necessarily the same place, as opposed to the asynchronous practice of taking turns (Wang, 2017). As we have seen, working synchronously would in theory be more efficient and probably lead to better work, and yet there is still resistance to using groupware in that way, to all work on the same text at the same time (Wang, 2017). Instead, people tend to work in separate, assigned sections (Wang, 2017). Unfortunately, this often can lead to disjointed writing and poor integration of unique information across the document (Münzer et al, 2009). It is unlikely that the divide and conquer writing style will go away completely, however, because as Olson noted, it may be useful in certain contexts such as commonly encountered“ in corporate life where a report is recurring, having the same format in general but different content, such as a monthly report. ”, (Olson, et al, 18). Still, it seems that it would be to their benefit if they could be made comfortable working more synchronously to the fullest extent possible even when relying on this method, with

the push always being towards truly writing together and not in separate parts. One major factor that makes them reluctant to do this is the lack of leadership (Wang, 2017). They believe that a leader will provide direction and make tough decisions (Mehlenbacher et al, 2018) (Wang, 2017).

They are describing convergence. According to media synchronicity theory, conveyance and convergence are two important parts of communicating that signal that a successful exchange of information has occurred (Dennis et al, 2008).

This is especially important when coordinating team writing efforts so that the finished piece will be coherent and consistent. Hopefully, integration will be the end result.

## Significance and Impact

Writing which lacks full integration primarily impacts the reader. In order for a reader to understand a document and find it useful, all sections should work together, ideas should flow smoothly, and the reasoning should be consistent. Writing teams that do not achieve conveyance and convergence will end up with a disjointed final product.

It also affects the efficiency of the team itself.

## Objectives

I was disappointed to find that most of the research studying group writing dynamics was done in the 80's, 90's, and early 2000's. With all the groupware we have today and our increasing adoption of it in the workplace, it is important that we study the effects utilization of this technology has on our group writing processes and how to recalibrate and optimize group efforts given the shifting factors and resulting dynamics.

For that reason, I want to determine the role a leader best takes in today's remote writing teams. What essential functions must they perform to ensure the smooth working of the group and a high quality product? How do they facilitate convergence in a group where the members are not well acquainted? I aim to define quality as integration, which will be determined by coherence, consistency, flow, and focus.

## Methods

The independent variable is the presence of a leader. The dependent variable being isolated is the quality of the paper, defined particularly by level of integration. I aim to study the effects of having a leader on the quality of the paper produced and how specifically that effect is produced. I will achieve this through two experiments conducted with participants who do not know each other:

### Observational study

1. I will first conduct an observational study of a writing group assigned with a leader.
2. I will also observe a control group which is not assigned a leader.
3. I will observe a second control group which has been instructed to avoid having a leader.
4. I will observe the behavior of the leader in the experimental group. I will observe whether the first control group designates a leader and how their behavior differs from
5. I will compare the quality of the second control group's paper to that of the experimental group and the first control group. Specifically, I will consider a group successful if their paper is well integrated (evaluated on previously described factors, repetition and citation of information) and rate it on coherence, consistency, flow, and focus, plus despite having been worked on with the piece method. I will have to ignore the groups who did not work through the piece method at all.

### Interviews

I will select the leaders whose groups were most successful. After reviewing observational notes on their practices and formulating appropriate questions based on them, I will interview the leaders and ask them what they did to facilitate convergence. I will also interview members of those successful groups. I will ask similar questions of the members of the unsuccessful group, asking them what they think went wrong and where their leader could have done better. Are they "discussing, comparing, and relating" (Münzer et al, 82) unique pieces of information more?

## Outcomes

I hope to determine whether the presence of a leader leads to higher quality group-written documents and which leader styles were most effective.



I expect that groups either allowed to naturally choose a leader or assigned one will produce higher quality documents than the ones told to work without one. This is because I expect that some groups who have a leader will be more successful than others, and I believe I will be able to identify specific practices employed by leaders in those successful groups that lead to that difference in quality.

Because of the previously noted trends in technical writing, it is likely that I will find myself commonly working in remotely connected groups upon graduation into the workforce.

When the author of *An Exploratory Study of Learning Transfer from the Online Technical Communication Course to the Workplace* interviewed instructor Linda, she said that ““Online collaboration is really good preparation for job situations. There are an awful lot of distributed teams out there in workplaces, and it will be very likely that you’ll work on a project where someone is staffed halfway around the globe. My anecdotal evidence from friends of mine working in consulting for different industries that they are often put in real situations where they have to coordinate 48 with someone who is staffed out of the office in Mumbai or London or something like that. So, these are real workplace situations when they are starting to develop strategies for efficient or effective work. (Schnoll, 47)”. Clearly I will need to know how to function within a group, and if I ever find myself in a leadership position, it will be helpful if I understand what the group most needs me to do and the unique challenges that the unique dynamics of the modern remote work environment brings. According to Schnoll, “As we move further ahead into the global economy, virtual teams have become commonplace in the field, as organizations “have increasingly had to change the way they work in order to address critical resource, personnel, and logistical issues” (Nystrom & Asproth, 2013, p. 64). I”(Schnoll, 7). Some of my classes have involved group work, and my group used the same synchronous writing software as described in the study. I experienced firsthand the effort it takes to keep on task and keep up communication while working over a distance. This is a good thing, because according to Schnoll, “communicating and collaborating over time and distance by use of technology is increasingly how the professional technical communicator typically works,... The virtual environment of the online course itself reflects that of virtual teams seen in the workplace today” (Schnoll, 6).

# Annotated Bibliography

Berkman, Mehmet. (2018). Shared Workspace Usability Scale -SWUS- Short Documentation.

This is a scale for measuring the quality of documents created using different collaborative software applications. I believe it will be useful when I am proposing a potential research project on this subject.

Chiu Chan, W., Migos, C. J., Lee, K. F., & Emanuel, M. F. (2018). U.S. Patent No. US9230356B2. Washington, DC: U.S. Patent and Trademark Office.

This is a patent for what seems to be a groupware platform. I think it will be useful because it describes in detail all the common features a groupware platform typically has. I might want to examine how these features facilitate collaboration and affect the dynamics of the group writing process. The language is fairly technical but not so much as to render it inaccessible to the layperson.

Li, M., & W. Z. (2017). Explaining dynamic interactions in wiki-based collaborative writing.

*Language Learning & Technology*,21(2), 96-120. doi:10125/44613

This looks at how writers collaborate and share knowledge within wikis when they are able to edit in real time simultaneously. I think this might be interesting because wikis are just starting to catch on in technical writing and I do not think much is

known about the dynamics of writing collaboration in this unique medium. It might be beyond the scope of my paper. It is not difficult to read.

Mehlenbacher, B., Kelly, A. R., Kampe, C., & Autry, M. K. (2016). Instructional Design for Online Learning Environments and the Problem of Collaboration in the Cloud. *Journal of Technical Writing and Communication*, 48(2), 199-221.  
doi:10.1177/0047281616679112

This paper compares two writing teams working with google docs. It specifically looks at how groupware affects team leadership styles and how writers work together, which is something I am interested in investigating. It offers advice on how to improve writing team management when working with groupware. It gives a brief overview of collaborative writing. It uses some technical terms, but is otherwise fairly easy to read.

Münzer, S., & Holmer, T. (2009). Bridging the Gap Between Media Synchronicity and Task Performance. *Communication Research*, 36(1), 76-103.  
doi:10.1177/0093650208326464

This paper looks at how information is shared within a group working collaboratively when the platform allows them to share in real time. It looks at the uses of specific features such as chat function. It looks at whether this ability leads to greater sharing and integration of specialized knowledge between group members, and whether it ultimately facilitates productivity and creativity.

Olson, J. S., Wang, D., Olson, G. M., & Zhang, J. (2017). How People Write Together Now. *ACM Transactions on Computer-Human Interaction*, 24(1), 1-40.  
doi:10.1145/3038919

This research paper looks at how students are currently using Google Docs to collaborate on writing projects. I think this will be useful because I am mainly interested in how writers today are using such platforms, their current practices and how the process can be optimized. I did not find it difficult to read.

Roopnarine, O. (2018, May 9). *How are new technologies affecting the technical writer/audience relationship?*[Scholarly project]. In Conservancy. Retrieved from [https://conservancy.umn.edu/bitstream/handle/11299/196497/Roopnarine\\_Capstone\\_Research\\_Paper\\_Audience\\_050918\\_v012.pdf?sequence=1&isAllowed=y](https://conservancy.umn.edu/bitstream/handle/11299/196497/Roopnarine_Capstone_Research_Paper_Audience_050918_v012.pdf?sequence=1&isAllowed=y)

This looks at how new technologies are affecting the relationship between the writer and the audience. It may be beyond the scope of my paper because most of my other sources are on the effects of new technology on the dynamics between writers working collaboratively.

Rubart, J. (2017). Synchronous Collaborative Text Editing in Wikis. HT.

This is another paper that looks at the dynamics of wikis. It deals with synchronous collaborative editing, as opposed to asynchronous. I think I might want to narrow my topic to that, because I am interested in the dynamics of writing teams working together on a document in real time.

Schnoll, Richard Scott (2017). An Exploratory Study of Learning Transfer from the Online Technical Communication Course to the Workplace. *Theses and Dissertations*. 1536. <https://dc.uwm.edu/etd/1536>

This paper looks at how the skills learned in online writing courses transfers the the workplace. It looks at the results of a two part study where students and instructors were asked to evaluate how well the skills taught in online writing classes transferred to the workplace. I think it will be useful because it will tell me how the computer mediated writing projects I am completing as part of my degree are preparing me for the workplace, what differences I can expect in the professional workplace, and how I can best prepare to work in such an environment. The reading level is accessible.

Wang, Dakuo & Tan, Haodan & Lu, Tun. (2017). Why Users Do Not Want to Write Together When They Are Writing Together: Users' Rationales for Today's Collaborative Writing Practices. Proceedings of the ACM on Human-Computer Interaction. 1. 1-18. 10.1145/3134742.

This looks at why some people are still reluctant to fully utilize the collaborative features included on groupware platforms and their general attitudes towards writing using this technology. It says that these platforms still need to be developed to fully engage users. It hypothesizes that upon further study, it may be found that novel behaviors may emerge never observed with traditional team writing setups. It also goes over the history of synchronous writing, which will be helpful when I am writing the background and context portion of this paper.

## Work Cited

Dennis, Alan R., et al. "Media, Tasks, and Communication Processes: A Theory of Media Synchronicity." *MIS Quarterly*, vol. 32, no. 3, Sept. 2008, p. 575.,  
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