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Electronic Editing: A Case Study at the Mountain Plains Regional Resource Center

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ELECTRONIC EDITNG: A CASE STUDY AT THE MOUNTAIN PLAINS REGIONAL RESOURCE CENTER

by

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Introduction

Editors have always played an essential role in the document production process. That process has drastically changed with the introduction of technology like desktop computers and word processing programs such as Microsoft Word. However, the editing segment of the process has remained very much the same as it was 20 years ago because of a lack of knowledge about and reluctance to use the editing technologies that has been developed recently.

Terminology

Throughout this paper, I will refer to this new editing technology as *electronic editing*. Other researchers in this field refer to it as *online* editing (Ackerman & Turecheck; Farkas; Velte). I have chosen to use the term *electronic* for a two reasons. First, my initial exposure to this technology used the term *electronic* rather than *online*. Second, since the time that many of the researchers who use *online* did their studies, the internet and the use of *online* to refer to it have become more prevalent. I do not want any confusion with the internet. While documents can be sent back and forth through the internet, or online, I feel that *electronic editing* provides a clearer picture by including all editing done on a computer, or electronically, rather than just editing documents sent online.

Mountain Plains Regional Resource Center

Many editors and companies are unsure of what to expect when using electronic editing software; as a result, they continue to use the tried and true practice of editing on paper. In an effort to help one company become familiar with the process of electronic editing and, in turn, provide an example for others, I suggested in December 2002 that the

Mountain Plains Regional Resource Center (MPRRC) in Logan, Utah, switch from their hard-copy editing process to an electronic process using the Track Changes feature in MS Word.

The MPRRC is one of six Regional Resource Centers and is a part of the Federal and Regional Resource Centers (FRRC) Network. They provide services for special education to the 50 states, the District of Columbia, the U.S. Territories, and the schools of the Bureau of Indian Affairs (BIA). The MPRRC serves the BIA, Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, South Dakota, Utah, and Wyoming. The Regional Resource Centers are funded through the Individuals with Disabilities Education Act (IDEA). Each regional resource center provides consultations, technical assistance, and training to state educational agencies and other state agencies providing special education, related services, and early intervention services. The MPRRC assists state and local education agencies in developing quality programs and services for children with disabilities and their families. Its staff engages in a variety of activities as they provide assistance. Included among assistance activities are workshops and conferences for state education staff, local education staff, teachers and parents; development of professional materials; and consultation on critical issues confronting state and local special educators.

The main staff of the MPRRC is comprised of program specialists. Most of the program specialists live outside of Utah in the MPRRC region and work through what they call a "virtual office." The majority of the employees in the Logan office are support staff, assisting the program specialists with secretarial work and keeping the office running smoothly. The support staff is often involved with typing and formatting

of documents that the program specialists will be using for their various activities. The program specialists rarely type and format their own materials, and the support staff rarely produce documents original to the support staff member. However, occasionally, the support staff also produces memos and emails from the support staff, not the program specialists.

My position at the MPRRC is as an editor and proofreader. Everything that is distributed from the MPRRC is given to me for proofing. I check for grammar, punctuation, general language usage, clarity as well as consistency, and some formatting. Before my suggestion to change to electronic editing, the MPRRC staff was providing me with hard copies of all the material they needed me to proof. Because I had experience with Microsoft Word's Track Changes feature and knew of its benefits, I wondered why the MPRRC did not take advantage of this software feature. Furthermore, I began to wonder if the use of this tool would improve the support staff's attitude about implementing changes since I frequently heard statements like, "There's so much red ink! This is going to take me forever," or "Do I have to fix all of this?" The final element that made me realize this change may be valuable was the fact that, of all the research I had read on electronic editing, there was not much that was really current (within the last five years) and few actual case studies—mostly descriptions of methods and reviews of literature. This final realization helped me decide to study electronic editing further, and, at the MPRRC, I had the perfect chance to do such research.

The research report that follows describes my case study at the MPRRC. Through the findings and observations from this study, I have concluded that even though electronic editing did not change all of the staff's attitudes about electronic editing and

did not help them all feel more efficient in the document production process at the MPRRC, the staff members who spent the majority of their time drafting or typing and revising felt the electronic process was more efficient and preferred it to the hard-copy process. In addition to my findings specific to the MPRRC, I have discovered several issues that other companies should consider as they contemplate a change to electronic editing:

- The amount of training could be more extensive than expected.

- Because of potential network access obstacles, companies with multiple reviewers may want to consider a different method of electronic editing than Microsoft Word's Track Changes feature.

- Time and, in combination, cost considerations should be carefully weighed to ensure the change will be beneficial.

This project involves substantial research in the area of electronic editing and will be a valuable contribution to other research that is already available. As the technology changes, the way people view and use electronic editing will also change. This report provides information on the view of technology and electronic editing at this point in its development and provides a case study describing how one organization shifted from paper to electronic editing practices. Although the effects of a shift from paper to electronic editing will vary from one organization to another, this case study will help other organizations, especially small ones, predict or project the changes they can expect after such a shift. This research report also fills a gap in the existing literature. This gap is a lack of case studies using electronic editing and showing how the process actually affects organizations rather than theories surrounding the technology.

Structure

I have divided this report into four sections. The first is a review of the literature I have gathered about previous research on electronic editing. This provides a background on the issue and the findings other researchers have discovered. It also provides a context for my research, showing how my work will add to the current research. (A bibliography is also included at the conclusion of the paper.) The Methods section describes the steps I took while conducting the research. I describe the tools used to gather the data, which I used to reach my conclusions. The Findings section is the heart of the report. In it, I answer the questions I ask in the beginning of the paper and describe the results of the surveys. In the final section, Implications, I discuss what my findings mean for the future of electronic editing. I also present some possible topics for future research in the area.

Literature Review

Since the introduction of electronic editing in the early 1980s, several studies have been done in the field, many of which rely on surveys to evaluate the success of these editing methods. Very few case studies have been performed like this research at the MPRRC. Most of the literature agrees that electronic editing, if done correctly and appropriately, is very beneficial for both writers and editors (Rude & Smith; Ackerman & Turecheck). However, some of the researchers feel that electronic editing is often misused when changes are not noted or editors make too many changes because of the ease of inserting them directly in the document (Velte). Despite the potential effect electronic editing could have on the many document production processes in the writing world, very little has been written on it. What follows is a detailed discussion of the small amount of literature available on electronic editing.

In the 1980s, when computers were becoming more common in the workplace, workers were inundated with new technologies that were going to help them do their jobs better including desktop computers and word processing programs. Early editing and review software was an expected progression from early word processors. During this early progression, however, there was not a program that would distinguish a writer's original work from editorial changes when the document was returned to author. As a result, authors often felt their "authorship" was compromised. Because of this outcome, many critics dismissed electronic editing as intrusive. For example, in "Does Online Editing Promote Trespassing?", C.E. Velte discusses the ethical implications of granting editors electronic access to an author's files. He suggests that this practice blurs the line

of who owns the files and that an editor's alteration of a "master copy" dilutes, in a way, the author's ownership.

He provided three possible solutions to this problem:

- Deny that ownership is an ethical issue.

- Devise clever programs that respect the author's rights to their work.

- Continue editing on hard copy.

He concludes that the first two options are not practical, and the only way to protect an author's ownership is to continue editing on hard copy. However, he realizes that electronic editing would probably become more prevalent and ends his article by urging editors to respect the "authorship" of documents in both electronic and hard-copy editing.

Others, however, were more open to the technology. In 1988, Ackerman and Turecheck's "The Risks and Rewards of Online Editing" presented the rebuttal to Velte. The authors suggest that companies make use of electronic editing to help solve problems of time and place constraints. They also argue that the increased efficiency of electronic editing is worth the small risk of trespassing, which is Velte's major concern. Finally, they suggest marks that clearly indicate what the editor did for review. Two of these changes include having the editor type in all capital letters or surround suggestions with square brackets. This is the beginning of the "track changes" software available today.

While these two articles show the opposite ends of the spectrum, some authors were trying to look at both sides at the same time. In the *Technical Communication* article "Online Editing and Document Review," David Farkas gives his views on the benefits, problems, and unresolved issues of electronic editing. He sees some problems similar to those associated with working on a computer (e.g., ergonomic issues,

visualizing a document on screen, and navigating through documents) while others are specific to electronic editing (e.g., representing changes and maintaining the editor-author relationship). Despite these problems, Farkas also argues for the benefits of this new editorial medium: the ability to work from remote sites, archive versions, and make use of computer-based resources.

As time progressed and the use of electronic editing became more widespread, the tone of articles on the topic changed. For example, eight years after his first article, Farkas collaborated with Steven Poltrock on "Online Editing, Mark-up Models, and the Workplace Lives of Editors and Writers." In this article, the focus shifts from whether or not to use electronic editing to how to use it more effectively. Recognizing that many people were using the technology, Farkas and Poltrock discuss electronic editing from the perspectives of editors and employers. They provide several suggestions or models, given below, for how to use the technology. Since the first set of articles addressed in this review, the technology had progressed to the point where software was available to show the changes rather than using the marks suggested by Ackerman and Turecheck. However, not all of Farkas and Poltrock's models use this software. The first two, which Farkas and Poltrock call the silent model and the comment model, simply make use of a regular word processing program. The silent model allows the editor to just make the changes. The comment model is similar to Ackerman and Turecheck's suggestions, employing comments within the text to tell the author what to change.

The edit trace model, the third model described by Farkas and Poltrock, is the generic name for the Track Changes feature in Microsoft Word. Insertions are underlined, and deletions have a strikethrough. Another version of the edit trace model

simply shows a line in the side margin showing that a change was made in the corresponding line. They emphasize that "editing is just one of an enormous number of collaborative activities that are moving online" (117); and if electronic editing is accepted, other activities may move in that direction as well.

In addition to these articles, which discuss opinions and introduce early solutions to obstacles, some articles address research done in the area. The first was published in 1984 by J.A. Lutz and titled "A Study of Revising and Editing at the Terminal." This article presents the results of a comparative study of writers editing and revising with computers and pen and paper. Seven writers performed four tasks: writing on a computer, writing on paper, editing on a computer, and editing on paper. Lutz suggests that the word processor directly alters a writer's composing style. It removes the physical and psychological restraints such as slowness of writing and recopying and the limitations of short-term memory. This physical ease of writing encourages writers to experiment. Even though computers seemed to improve the writers' attitudes about composing, Lutz concluded that the tools that facilitated that task inhibited editing.

Another major study about the early effect of electronic editing was "The Use of Computers in Technical Editing," published in 1992 (Smith and Rude). This study has also been the basis for several others. The study gives survey respondents' reasons for either choosing to edit electronically or not. Carolyn Rude and Elizabeth Smith sent a survey to members of The Society for Technical Communication who listed their occupation as "editor." Of the 94 editors who responded, 62.8 percent said they used computers for some of their editing tasks. However, two-thirds of the editors still depended on hard-copy editing for long documents and substantive editing.

The participants of the study listed several reasons for choosing not to use a computer:

- Limits of screen size and linearity of scrolling

- Lack of familiarity with computer capabilities

- Limitations of software

- Problem of annotation

The goal of their research was to determine if computers are being exploited ineffectively or whether they are unsuitable for editing. Rude and Smith conclude that "the overall editorial procedure of evaluating a text, marking it, and negotiating emendations...has not changed as editors have integrated computers into the process"; however, "editors who use computers have more responsibility for the visual aspects of the text and for managerial tasks" (342).

Since Rude and Smith's research, little had been published on the topic until David Dayton's recently published research for his doctoral dissertation. Dayton's goal was to determine how much electronic editing technical communicators do, the factors promoting and/or constraining electronic editing, the blending of hard-copy and electronic editing, and how electronic procedures affect the editor's role.

Dayton's research led him to four conclusions:

- The circulation of electronic editing in technical communication has been advancing gradually, erratically, and diversely since the mid-1980s.

- Perceptions of electronic editing and its incorporation in the workplace depend on the preferences of the individuals and the contexts that surround them.

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- Some instances of electronic editing preserve traditional constraints on the editor's choices with regard to edited texts. Others, however, recast the editor in a role that is more familiar in journalism than technical communication.

- Electronic editing and hard-copy editing coexist and reinforce each other. "Most editors who edit…make the changes to soft copy at least occasionally, but when they do, most of them make hard-copy reading and even hard-copy markup an integral part of their mainly electronic process" (382).

Dayton's conclusions show that trends are emerging in electronic editing despite the great amount of personal preference and different styles of its users.

Rebecca Downey also recently published a case study showing the effect on her company of the change to an electronic editing process. She also explains the obstacles they overcame and how they overcame them. The article, titled "Using an Intranet to Facilitate Document Review: An Informal Case Study," discusses the move from hard-copy editing to electronic editing for a networking hardware company. Downey describes the process the growing company went through while changing the process to better accommodate a larger staff. As the company grew, the task of reviewing and revising documents began to "spin out of control." Downey, as the technical writer, decided that changes were needed. She made a list of five outcomes she wanted to work toward and began designing a system to incorporate all of them. She wanted to track the changes, manage deadlines, impose consistent style, provide reviewers with copies that were easier to read, and reduce the paper load. Her solution was to move from their paper

process to a completely electronic one using the company intranet. She developed a three-stage review process (alpha edit, beta edit, and final edit) and published it as a Web page on the intranet so all the reviewers would know what to do when. She then created pages describing each reviewer's role and hard-copy checklists for reviewers to fill out as they completed their tasks.

As the new process was put into action, it fell short of Downey's goals. The process turned out to be more time consuming than the previous one. Also, she spent more time clarifying misunderstandings that resulted from the electronic versions, something that had not been a problem before. Finally, she found the addition of checklists complicated the process as some of the reviewers were not completely sure how to use or return them. Despite these problems, Downey felt that the new process provided many improvements:

- The reviewers better understood what she was looking for in feedback.

- The reviewers had more electronic guidance so she spent less time answering questions or arguing issues.

- It minimized the review time.

- She could more easily track the changes and the authors of these changes.

After this initial trial, Downey decided to make even better use of the intranet. First, she put the checklists into HTML form. She also introduced a "document information segment," a table with the most important document information like the title, writer, contact information, and deadlines. Putting all the information the reviewers needed on the intranet greatly simplified the process. It also helped make the forms more

straightforward and, as a result, provided Downey with more standardized feedback that was easier to organize, manage, and incorporate.

While the process is not yet perfect, Downey continues to refine it. She plans on holding a meeting with the reviewers to get their feedback and work out the remaining problems. This case study shows how one company moved to an electronic review process; and while my case study is not nearly so complicated, it is much like Downey's.

This literature is the foundation of my research. The early articles listed here allowed me to see some of the hurdles I may have to face as I implemented this change in my own workplace (Velte; Farkas). Through Rude and Smith, however, I was able to see that many editors still choose to use electronic editing despite these complications. This fact made me wonder why editors would continue to use a process that has so many potential drawbacks (limits of screen size, software, annotation). This progression towards electronic editing was also shown in Dayton's research, as well as the change in the editor and writer's roles, which are evident in this study also. While all of this research allowed me to see the potential areas left for research, Downey's also showed a model to follow. When introducing anything new to a process, there are difficulties to work through and questions to be answered. Also, adjustments must be made when something is found not to work as envisioned. Downey's article showed a way to work through these obstacles. However, my research differs quite substantially from Downey's in that I look at a different way of implementing the electronic editing process.

The electronic editing process can be and is very diverse in its implementation. As a result, not every study will fit every situation. For example, the situation at the MPRRC is unique in that the support staff acts as a go-between for the editor and authors.

In many situations, there is not third person. Even though the process implemented in this case study is not as complex as the process in Downey's, the presence of the support staff creates a complex situation in other ways. For instance, most changes I suggest as editor are taken, but for some, the support staff must ask the author for permission. This is a step not present when the author is reviewing the suggestions and implementing the changes. Because every company and situation is different, showing the results of a similar switch to electronic edition for every one is impossible. However, as the research continues, including Downey's study and mine, many situations will be covered.

The articles and studies presented here demonstrate the progress in editing from the introduction of electronic editing to the present day. They also show that despite the current prevalence of computers and technology in this time, many are still reluctant to venture into the unknown. This report adds to previous research by showing an editing situation that has yet to be documented. While Downey's case study shows one switch, not all companies have the resources to produce such an elaborate set up. Also, a set up similar to Downey's is unneeded for smaller companies, such as the MPRRC. My research will help smaller companies see an example that may work for them.

My research answers the following questions for the MPRRC:

- Does using electronic editing improve the staff's attitude about implementing editorial changes?

- Does electronic editing change the staff's perceived efficiency of the document production process?

- Does the staff prefer electronic to hard-copy editing?

Methods

To answer the questions presented in the previous section, I used the following tools and methods:

- Pre-study questionnaire

- Training

- Implementation and journaling

- Post-study questionnaire

Pre-study questionnaire

My first activity was a 10-question questionnaire asking the participants about their work responsibilities and time spent on drafting or typing and revising documents. It also covered their attitudes about the hard-copy process in place at the time and their expectations once the electronic process was initiated. A copy of the questionnaire and the results are provided in Appendix I (p. 37).

Training

Following the questionnaire, I provided a short training session with each participant. This training showed what a document edited with the Track Changes feature would look like and how to either accept or reject the changes. I also showed them how to read electronic comments, or "sticky notes," and how to delete the comments once the change had been accepted or rejected. Figure 1 shows an example of a document edited using Track Changes.
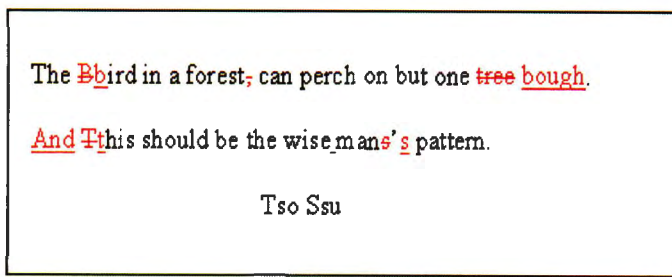
The ~~B~~bird in a forest~~,~~ can perch on but one ~~tree~~ bough.

And ~~T~~this should be the wise man~~s~~'s pattern.

Tso Ssu

Figure 1 Example of Track Changes

As shown in Figure 1, deletions are illustrated with a strikethrough and insertions are underlined. This example shows the changes in red, but the Track Changes feature allows the user to choose a variety of colors. This is especially helpful if more than one reviewer is making suggestions.

Implementation and journaling

After the training, I began the main portion of my research. For the months of December 2002 through February 2003, I did all the editing for the MPRRC's Word-created documents using Microsoft Word's Track Changes. The hard-copy process in place when I began work at the MPRRC had several steps. First, the program specialists would give the support staff the materials to complete whatever task needed to be done. This often included handwritten, or sometimes typed, notes, previous versions, or previous correspondence. After completing their work, (which includes, among other tasks, typing, formatting, and creating graphics) the support staff would then give all the materials to me. The materials included anything the program specialist provided them along with their draft of the most recent version. After proofing, I returned the materials to the staff person involved, and they would implement my changes and return the finished product to the program specialist. Depending on the amount and type of changes

required (major reorganization, content suggestions, etc.), the document might require another round of proofing.

In order to implement the change from hard-copy editing to electronic, little was changed in this process. The participants still gave me all the materials they would have before except now, they also gave me the document path, which provided the information need to locate the file on the network. The document path includes the drive letter and the subsequent files leading to the actual file name of the document (e.g., C:\WINDOWS\Desktop\Thesis\Thesis.doc). After proofing, I returned all the materials to them, which let them know I had completed the editing, and they finished their document by accepting or rejecting my editorial changes and making any other changes they saw fit.

During this period of my research, I recorded any questions I was asked or comments they had about the process. I also noted trends in my own work that differed from the previous process. These notes can be found in Appendix II (p. 44).

Post-study questionnaire

At the end of the three months, the participants completed another questionnaire about the entire experience. This second questionnaire addressed how their opinion of the process had changed since they were first introduced to it. It also determined their attitude about implementing editorial changes in comparison to three months earlier and asked them whether they wanted to continue the electronic process or return to hard-copy editing. This post-study questionnaire is available in Appendix III (p. 47).

Findings

The MPRRC currently has nine support staff members, but my study is based on only five of them since I do not have an editorial relationship with the other four. All five study participants are women. Their work responsibilities vary and include several activities. Some do strictly secretarial work like transcribing memos and letters. Others compile reports, which can range from weekly reports to end-of-semester reports. Several have also been involved in putting together handbooks for states on varying special education topics. Other tasks include making presentation handouts and agendas, compiling overheads, or reformatting PowerPoint presentations to address a new situation more effectively. In addition to handling the work that I proof, they also do other tasks such as accounting and making travel arrangements. The following table illustrates the breakdown of their time at the MPRRC, ranging from the 35 hours Julie spends drafting or typing and revising to Jackie who spends less than five hours on the task:

Participant*	Time at MPRRC	# of docs drafted/typed per week	Time spent drafting/typing per week	% of docs sent to proofing	Time spent revising per week	Total
Julie	2.5 years	5-15	**30 hours**	90%	**5 hours**	**35 hours**
Ann	4.5 years	30	**30 hours**	95%	**3 hours**	**33 hours**
Lisa	6 months	10	**10 hours**	90%	**1-2 hours**	**11-12 hours**
Jackie	8 months	3-4	**10-14 hours**	100%	**45 minutes**	**10.75-14.75 hours**
Donna	5 months	20	**7 hours**	15%	**1.5 hours**	**8.5 hours**

Table 1 Time breakdown for support staff   ***Names have been changed.**

Note that some of the support staff members, particularly Donna, spend less time drafting or typing documents than others. This is because of the differences in job responsibilities. Donna's main position is secretarial, taking care of the office lobby area, answering phones, and putting together final meeting materials, which includes copying and collating rather than typing the materials. The others who spend less time drafting or typing documents are in a similar situation, participating in other activities during the day. The majority of Julie and Ann's responsibilities consist of typing and revising documents. Also notice that the participants who spend the most time drafting and typing documents also spend the most time implementing changes.

Even though I conducted this study, I was also a participant since I was the editor. In order to fully present the impact of the study, I must also present information about myself. At time of this study, I had roughly a year and a half of experience as an editor. This experience included coursework at Utah State University (USU) where I participated in editing projects. One such project consisted of editing a chapter from a history text translated from Chinese. I also had the opportunity to participate in a freelance project that required editing a textbook about Gas Metal Arc Welding for an engineering professor, also at USU. These projects helped me gain experience in basic copyediting as well as substantive editing and prepared me for the internship I acquired at the MPRRC. At the time of the study, I was working around 10 hours a week and edited all the documents sent to proofing.

Staff's attitude prior to the change

The pre-study questionnaire revealed several trends about the MPRRC staff and their attitudes about the document production process. I will address those trends below as well as provide my own impressions at the beginning of the study.

Support Staff

All five participants expressed that they do not mind revising proofed documents. This statement does not mean they look forward to it, however. Donna's response was that the revising process is part of the job, and she wants documents to be correct; however, her attitude changes based on the "amount of red ink" on the page when she gets it back. Ann expressed that her attitude will change depending on what other projects she has going at the same time. If she has plenty of time, she does not mind doing the revising at all; when she has a long list of projects to complete, she would rather not be spending her limited time implementing often minor changes.

Even though the staff did not have a bad attitude about their original process, they all had aspects they would like to change about it. The major theme of their suggestions was developing a style guide. Jackie's comment was that there was a "need to come to a conclusion on changes." The MPRRC uses the APA style guide, but the program specialists do not always want to incorporate those guidelines. Ann's major problem was that some of the decisions seem very arbitrary; as a result, they can be hard to remember. As the editor, I have a style guide that I use in addition to APA. However, the rest of the staff does not. This theme of wanting a style guide cannot be solved with a change to electronic editing. Two participants, though, did have aspects they would change that could possibly be solved by the switch. Julie wanted the proofer to make the changes.

She felt this would save her time as well as prevent changes from being overlooked. Because the editor marks suggestions directly on the electronic copy of the document, the chances of missing changes is very small. Potentially, Julie's suggestion would be accomplished with the move to electronic editing. Lisa's suggestion also differed from wanting a style guide. She wanted to change the amount of time needed to get through the process. The original process required I read through the entire document and make my suggestions by hand and then return it to her to implement the changes. The electronic process eliminates the most time-consuming portion of implementing the changes since all she would have to do is say yes or no to each one.

The final question on the pre-study questionnaire asked if the participants thought an electronically edited document would help do the job more efficiently. All five respondents felt that it would. Lisa's reason for thinking this was that she would "save time and not miss any changes." Julie expressed she thought it would be more efficient because she would not have to make any changes. These comments are similar to the comments of the other three staff members. The pre-study questionnaire illustrates the willingness of the MPRRC staff to try a change. Based on the comments made, one can conclude that while they do not mind progressing through the editing process, they all feel it could use some improvements.

Editor

After conducting the pre-study questionnaire, I felt very optimistic that the change would be beneficial both to the support staff and to me as the editor. Having proofed some documents multiple times before final production, I found myself making the same changes more than once because they were overlooked by the support staff member in

my original review. I hoped a move to electronic editing would eliminate this change for error and help ensure more correct, consistent documents.

Staff's reaction to the training

As mentioned earlier, the participants received a brief training to introduce them to the Track Changes feature. These initial trainings seemed to go well, and the participants walked away feeling they understood enough of the program to work it. However, as the use of the feature began, the participants had questions that were either not covered in the training or covered by the participant forgot. What follows are the major questions I was asked during the transition. After each question, I discuss how the problem was solved and the outcome.

- *How do I turn off Track Changes so I can continue to work on the document without highlighting?*

  This problem was easily solved. I showed them how to turn off the program so when they made any changes of their own, the text was not highlighted in red or underlined.

- *Why does the line showing a change stay on after all changes were accepted or rejected?*

  The Track Changes feature places a vertical line in the margin next to the line where the change is. In this case, it turned out there was a change that was not highlighted in red. The default setting in the program does not highlight formatting changes, which was what the change was. Once we figured out why the line was still there, it was easily fixed. From this point on, I made sure to change the options to include highlighting formatting changes.

- *One participant wanted to send the document back to the originator showing the changes made by the Director of the MPRRC and me but somehow distinguishing between his comments and my own.*

Because others did changes on hard copy, we had never had a need for something like this. However, in this case, the document showing the changes needed to be sent to the originator electronically. The Track Changes feature is equipped for multiple reviewers, showing each reviewer's comments in a different color. With this built-in feature, I was able to add my changes to the director's, and they were easily distinguishable.

- *Why is it highlighting changes after I've opened a new document?*

After implementing changes on one document, the participant opened a new document and began working, but it was still highlighting changes. Since I started turning it off before they began revising, she had forgotten how to turn off the feature. We never did figure out why the feature was on since the document had not had any work done with Track Changes, but I showed her how to turn it off and the problem was fixed.

All of these questions show a need for a more comprehensive training session. The short training I provided showed the very basics and allowed the participants to navigate Track Changes given nothing new or unexpected came up. When these problems arose, the participants were not familiar enough with Track Changes to find a solution. I had not anticipated these particular problems during the training sessions. As they became more acquainted with the program, the questions virtually disappeared. I was surprised that the transition went as smoothly as it did, with few questions.

Defining the process

Because this was a new process for everyone, there was a period of time required to adjust and find the best way to execute it or define our roles and responsibilities. Here I will discuss the issues that needed adjustment for the support staff and myself.

Support Staff

Most of the questions asked of me dealt with not knowing the track changes feature very well and needing help to solve a problem. However, one of the questions was request from the staff in order to make their jobs easier. One participant asked that I turn off the Track Changes before I saved the document and closed it. If I left the program turned on, any additional changes by the staff were also highlighted. The participant who requested that I turn it off found it easier for me to turn it off and felt her job went more quickly because she did not have to remember to turn it off. This was not an issue I had anticipated, but it was a minor change to my end of the process.

Editor

The only real problem I noticed as I was getting used to the new process was in gaining access to the document. The documents were saved on the MPRRC's network drive and could be accessed from any computer connected to that network. However, if the creator of the document did not close it on her computer, I could only open a "read-only" version, preventing my access to edit. This was not a major problem but happened often enough for it to become frustrating, at least for me. I repeatedly asked the participants, especially the ones who did it most often, to close the documents before giving me the materials, but this did not really help. I found myself going to the

participants several times a day to remind them to close a document before I could gain access.

Effects of the change

This change affected all the participants differently. Some really like the Track Changes feature while others implied they preferred the hard-copy process. No matter how they felt about the process, the way they implemented changes was drastically different. I also noticed changes in my own editing style. These attitudes and changes are discussed below.

Support Staff

Even though all the participants fall under the category of "support staff," the support staff can really be divided into two sub-categories. Ann and Julie, who spend the most time typing and revising documents, work on larger documents that the program specialists have developed. Since Ann and Julie are not the authors, most of their time is spent inputting text. Ann and Julie rarely work on documents they themselves developed. The other three participants produce shorter documents, like correspondence. Also in contrast with Ann and Julie, this group also produces some original documents like summaries of staff activities or their own correspondence.

The results of the pre-study questionnaire indicated that the staff did not mind implementing editorial changes. Lisa, Jackie, and Donna's responses on the post-study questionnaire were that their attitudes have not changed. They still do not mind making the revisions even though they may not look forward to it. However, Julie and Ann, the two staff members who type and revise the most, responded differently. Julie said that

she liked that she did not have to make the changes herself, and Ann liked that electronic editing was faster and she had more time for everything else.

One question on the post-study questionnaire asked whether the participants felt more efficient with electronic editing. Another asked if electronic editing changed the amount of time the spent drafting or typing and revising documents. Three of the five participants (Lisa, Jackie, and Donna) expressed that they did not feel more efficient. However, all five responded that electronic editing was faster for implementing changes than reading through a hard copy and inputting the changes themselves.

The responses for why the participants felt the process was faster echo each other. Julie felt it took less time to look at the changes and accept them than it did to make all the changes herself. Similarly, Lisa said the process was faster because "changes are already made." Jackie's answer was identical to Lisa's, stating "it is much faster; the changes have already been made." Ann and Donna replied with answers that mirror these three.

So even though the staff felt the process was faster, the majority did not feel more efficient. This seems contradictory at first because faster usually means more efficient. But as the explanations for their responses are given, one can see why Lisa, Jackie, and Donna did not feel more efficient. Lisa explained that while it's more efficient in that the changes are already made, sometimes changes are overlooked and not noticed until the document is printed. When this happens, she has to go back into the file, find these changes, and print the document again.

Jackie's reason for not feeling more efficient was this: "I have a harder time proofing and revising on the computer. I like to read the content with the changes.

Sometimes it's hard to get the 'entire view' on the computer." Donna's reason was similar. She has to open the document to see how much time she was going to need based on the amount of changes. If she decided she wanted to wait until later, she had wasted time checking when she could have quickly flipped through the pages and scanned for changes with a hard copy. Again, this is a problem with seeing the "entire view." Lisa also mentioned this problem when asked if she would like to continue with the process. She wrote, ". . . it was nice to see the changes I need to make by just glancing at the paper rather than having to pull [the document] up. . ." Because of screen limitations, working on a computer limits the amount of material one can see at a time, requiring scrolling to see everything. This is a common theme in literature about electronic editing (Farkas; Rude & Smith). Based on the comments of Lisa, Jackie, and Donna, one can conclude that some people would rather see the entire document up front and the fact that implementing changes is faster does not make them feel more efficient.

Electronic editing is only one step in the document production process, but it seems logical that if this step is finished more quickly, the whole process would be faster as well. However, in this case, only Julie felt she spent less time working on a document from start to finish. The other four felt they spent about the same amount of time on documents, and Jackie went so far as to say the process might take ". . .a little longer [because of] scrolling through the document." Julie, the only one who felt the entire process went more quickly, said this: "I probably worry less thinking the proofer will do the work of changing the document." This statement implies that because Julie knows someone else will be making the changes, she does not take as much time to ensure she gives the proofer a document that is as correct as she can make it. This attitude was

evident while we were working on a particularly large project. The document had been scanned from the original because we did not have access to an electronic copy. During the scanning process, much of the formatting was lost, including many tables. When Julie gave me the document for proofing, I fixed all the format and table problems, meaning my role as an editor had changed to include a larger responsibility for the visual elements as Rude and Smith noticed in their survey. When Julie saw I was making these changes, she said she had not done them because she knew I would. In this instance, the time she spent working on the document was greatly reduced as I did a large portion of the corrections.

Donna's response on this question illustrates the opposite attitude from Julie's. Donna wrote she did not think the entire process went faster because she wants to send the draft as well done as possible. Her statement shows that she tries to send the document to the proofer as complete as possible, maybe so she does not need as much time later to implement or accept the changes.

Despite whether on not the participants felt they spent less time drafting or typing, the participants indicated that their style of implementing changes was different. Ann, Julie, and Donna stated that they usually accepted all changes, sometimes without really reviewing them. With the hard-copy process, they had to look at every change; now it is possible for them to revise a document without looking at any of the changes. This action could be seen as both a positive and a negative. While I am sure it helps the process go more quickly, and they indicated as such, accepting changes blindly could allow errors to pass through into the finished document. Editing suggestions are just that, suggestions; and while some issues, like grammar, leave little room for interpretation,

others are not so concrete and should be checked to ensure the intended meaning is delivered.

From the above findings, it appears that the support staff members who did less original work (Ann and Julie) were the participants who liked it the most. Those who spent less time typing and actually produced original documents were not as happy with the process. Even though a majority of the participants did not feel more efficient as a result of electronic editing, all of them stated it was a process they would like to continue with. The range of enthusiasm, however, is varied. Donna, Julie, and Ann are more than willing, giving reasons from "it's more accurate" to "it's faster." Jackie and Lisa seem more reluctant. Jackie's response was, "If it is easier for you . . . For me, it's nice to look at a paper vs. computer screen. However, I think it does save paper and is more error free. I see advantages . . . and disadvantages." Lisa's reluctance appears to have the same cause: she likes to be able to look at a hard copy before committing to working on a document in case she does not have the time to complete it.

Editor

At the beginning of the study, my role in at the MPRRC was a proofreader. I did suggest large changes in content, organization, or format. However, as the study moved forward, my role slowly began to change. Because the staff found my making large changes easier for them, my role progress from just a proofer to an editor looking at the format and organization of documents. Because my role changes, the way I worked also changed. I observed several differences in my own work while using Track Changes vs. the hard-copy process. These observations can be summarized in the following:

- More substantive organizational editing

- More intervention directly in the document with comments

- More formatting directly in the document with comments

- Find/Replace

- More time consuming but closer reading

Substantive organizational editing. First of all, I noticed I made more comments about organization and structure because I had more room to write them. I was not limited to squeezing a comment into a margin or a sticky note. I also noticed I made more substantive changes like rearranging sentences or putting data into a table, as mentioned in the example earlier.

Intervention directly in the document. Because I had the electronic version, I could very easily change sentences or introduce new items. With the "reject change" feature, these changes could always be taken out without more than the click of a mouse. The ease of rejecting a change provides a counter argument for Farkas's view that electronic editing infringed on the author's ownership.

Formatting. In addition to my adding more comments and suggesting larger changes, I also noticed I made more formatting suggestions, once again because I could just make the change. Formatting changes often required an explanation so the person implementing the change would understand exactly what I meant. Doing it electronically showed what I was suggesting immediately and eliminated sometimes confusing changes that could be misunderstood.

Find/Replace. One option of the Track Changes feature I found helpful was the chance to use "find/replace." If a document contained the same mistake several times, I

could change all the instances of that mistake at once. This saved me time and helped ensure consistency within the documents.

Time consuming/closer reading. My final observation was that I noticed myself taking more time to do the proofing. I know that I often miss problems on a computer screen that I would not miss on a hard copy. Being aware of this caused me to slow down my reading and read through a document more times than I probably would have with a hard copy. As a result of this closer reading, editing documents required more time on my part despite the decrease in time for some of the participants. My portion of the process also required more time because I was making larger, more time-consuming changes such as the large document of Julie's addressed previously.

Implications

In the beginning of this report, I asked presented three questions that I wanted to answer through this study:

- Does using electronic editing improve the staff's attitude about implementing editorial changes?

- Does electronic editing change the staff's perceived efficiency of the document production process?

- Does the staff prefer electronic to hard-copy editing?

Even though the majority of the participants did not have a change in attitude or perception of efficiency, the important issue is this: The staff members who did the most drafting or typing and revising (Julie and Ann) felt the electronic process was a large improvement over their old, hard-copy process. Even the remaining participants felt the editing portion of the process went more quickly. They also expressed that they thought the electronic process was more accurate and left less room for error than looking at a hard copy and imputing the changes themselves. Given these findings, I feel the move to electronic editing was a good decision for the MPRRC. Those most involved in the work of producing documents were very pleased with it and expressed a desire to continue using it without hesitation. While the others had some hesitation, I believe it was the result of their participating in the process on such a smaller scale and not having the exposure to it that Julie and Ann had.

The questionnaires used and the findings presented in this study show the outcome of switching from a hard-copy process to an electronic one for a very small company. However, it is only the first step in seeing how other companies similar to the

MPRRC might deal with a comparable switch. I think the results shown here illustrate a strong link between personal preference and the effectiveness of one process over another as Dayton suggests. Jackie and Lisa implied they have a harder time working through the changes on a computer screen and would rather have the hard copy. I am sure many other people feel this way. In these cases, using electronic editing is probably not the best choice. However, for others, like Julie, who do not mind working with the document strictly on a computer and spend quite a bit of their work day on these documents already, electronic editing has the potential of greatly improving the process, allowing more time for other aspects of the project or reducing the chance of missing errors.

Trends and Recommendations

Before implementing electronic editing, small businesses like the MPRRC, should consider the following trends and recommendations from my experience during this case study. One major issue was the training in how to use the feature. Most of problems the staff experienced were a result of insufficient training. The short, basic training I gave the participants of this study did not seem to be sufficient. One reason was my not anticipating some of their questions. However, most of the questions asked appear to be the result of too little training and practice before beginning to use the Track Changes feature full time. Companies considering such a change can better train their employees by basing their training on the results given here. I suggest doing a longer training and allowing more hands-on practice with the program before fully implementing it in the workplace. The training would probably be most successful if it included several scenarios that the users may come across as they use the Track Changes feature.

Many of the problems the participants of this study had could have been solved without my help had the participants remembered how to access the feature options. One scenario could require the users to access those options in order to solve the problem. Some scenarios could include turning the feature on and off, changing the color of the highlighting, accepting changes, rejecting changes, reading comments, deleting comments, and even making their own changes to see how it works from the reviewer's end.

Another training issue was network access. Many companies, like the one shown in Downey's study, use several reviewers on each document. In Downey's setup, all the reviewers could be reviewing the document and suggesting revisions at the exact same time. Using the simple setup shown in this study, this was not possible. At any given time, only one person could have editing access to a document on the network drive. Other companies need to take this into consideration. If their current process requires several reviewers during the same time period, the Track Changes feature studied here may not be their answer for an electronic editing process. My major problem was not being able to gain access because the file was open on another computer. Perhaps during the training session, having a file open on another computer and asking the participant to open it as well would reinforce the need to close the file before handing it over for review.

Companies should also consider making the training individualized for different staff members. Like at the MPRRC, some companies may have some employees who work on longer documents and those who concentrate on shorter ones. The training for each group may differ depending on the type of documents with which they will be using

the feature. For example, employees who work mainly on correspondence will not likely use the comment feature very often, but the employees working on longer documents will probably see comments often. As such, the training for the group working on correspondence would not need to spend much more than a brief introduction on the comment feature.

Time considerations are another issue companies need to address before fully switching to electronic editing. While the implementation process went more quickly for the participants, the amount of time required for the editing portion was larger. A determining factor may be whether or not the entire process takes longer in the end. For companies looking for a very quick turn around, moving to a more lengthy process would not be of benefit. Companies should also consider this trend from the angle of "How much does it cost?" If the employees implementing changes are paid more than the reviewers, then having the reviewers spend more time will not make much of a difference. However, if the reviewers are paid more, the company will pay more in salaries by requiring the reviewers to take more time.

Companies considering this type of change may want to do their own sort of case study, changing to electronic editing on a trial basis and then determining if the change would be beneficial. They should consider the time/cost issue as well as employee attitudes about the process.

Further Research

In order to fully comprehend the outcome such a switch would have on other companies, other research needs to be conducted. One topic that should probably be explored is whether or not electronic editing truly reduces the amount of errors in a

finished document. Most of the participants felt electronic editing was more accurate, leaving less room for error, but this study did not cover the accuracy of finished documents. I wonder, too, if this is more of a question of the editor's ability rather than the medium in which the editor provides feedback.

Since this study focused more on the participants' perceptions on efficiency and time needed to complete a document, another important aspect to address is whether or not electronic editing reduces the time spent on revising and implementing changes. While the process may be easier for some companies because of paper-saving issues or sending documents to off-site reviewers, these companies may want to reconsider a move to electronic editing if the process takes more time as a result of the change. Again this seems to revert back to personal preference. Maybe the paper or time saved by sending reviewers electronic copies would out weigh the need for a quicker turn around time and having the process take longer would not matter. However, for another company, the priority may be in getting the document proofed as quickly as possible. In this case, changing to a process that takes more time would not be productive.

In conjunction with research on time, research should be conducted on the cost differences between a hard-copy process and an electronic one. Factors to be considered could be, among other things, paper and ink costs, salaries, and total amount of time dedicated to one project while another also needs to be completed. Seeing actual numbers for costs would be a great help to companies trying to decide if electronic editing is for them.

Conclusion

This study shows a situation that has not yet been addressed in the research about electronic editing. Because of the go-between of the support staff at the MPRRC, I, as the editor, did not have a direct relationship with the author. This situation created some complications, such as the author not being fully aware of what was being changed and the chance that parts would be changed incorrectly. The support staff's lack of ownership also presented some new issues. In many ways, this lack of ownership helped because the staff was not offended if I suggested changes. Since it was not their original work, they were not attached in any way. This same lack of ownership presented a problem, however, when the support staff would make fairly large changes without consulting the author. While I never experienced any major problems as a result of this at the MPRRC, this is a potentially explosive issue in a situation similar to the support-staff structure. Making changes without consulting the author could result in changes in meaning or not presenting materials in the way author intended.

In addition to showing the results of a change to electronic editing, this report shows that the editor/author relationship can be much more complex than the simple one-author-to-one-editor ratio often presented in the research. However, despite the complex structure of this particular situation, I feel the findings of this study are applicable to many of the other editing situations in use.

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APPENDICES

Appendix I

Pre-Study Questionnaire

Pre-study Questionnaire

- How long have you worked at the MPRRC?

- What are your job responsibilities?

- How many documents do you draft/type in a week?

- On average, how much time do you spend drafting/typing documents? (Don't include revisions.)

- How many documents you draft/type get sent to proofing?

- On average, how much time do you spend implementing changes in a week?

- Is there anything about the current process that you would like to change?

- How do you feel about revising a proofed document? (look forward to it, dread it, etc.) Does it depend on the number of edit required?

- Have you ever worked with the Track Changes feature in MS Word? How do you think it works?

- Do you think an electronically edited document would help you do you job more efficiently? Why or why not?

Pre-study Questionnaire Results

- How long have you worked at the MPRRC?

Lisa	6 months
Julie	2.5 years
Ann	4.5 years
Jackie	8 months
Donna	5 months

- What are your job responsibilities?

Lisa	Staff support and accounting
Julie	Bureau of Indian Affairs travel and contact and staff support
Ann	Project coordinator for office and staff support
Jackie	Calendar, weekly report, typing, etc.
Donna	Secretarial

*Staff support indicates typing, emailing, sending materials, etc. for the program specialists

- How many documents do you draft/type in a week?

Lisa	10
Julie	10
Ann	30
Jackie	3-4 depending on the number of hours I work.
Donna	20

- On average, how much time do you spend drafting/typing documents? (Don't include revisions.)

Lisa	10 hours a week
Julie	Most of my time, probably about 30 hours.
Ann	30 hours a week
Jackie	I work 15 hrs. a week, so probably about 10-14 hours.
Donna	7 hours a week

- How many of the documents you draft/type get sent to proofing?

Lisa	90 percent of the documents will get changes.
Julie	90 percent
Ann	Probably 95 percent
Jackie	100 percent depending on the week.
Donna	Around 15 percent

- On average, how much time do you spend implementing changes in a week?

Lisa	Less than 1 or 2 hours
Julie	5 hours
Ann	3 hours a week
Jackie	45 minutes
Donna	1.5 hours

- How do you feel about revising a proofed document? (look forward to it, dread it, etc.) Does it depend on the number of edit required?

Lisa	I don't look forward to it, but it's not bad.
Julie	Kind of the middle—I don't really like it, but I don't mind it either.
Ann	It's a helpful part of the job. It does depend on what other responsibilities I have at the time.

| Jackie | I don't mind it; I like documents to be correct. |
| Donna | It's part of the job. Yes, it depends on the amount of red ink! |

- Have you ever worked with the Track Changes feature in MS Word? How do you think it works?

Lisa	No experience
Julie	I've never worked with it.
Ann	No
Jackie	No experience
Donna	No

- Do you think an electronically edited document would help you do you job more efficiently? Why or why not?

Lisa	I think it will save time, and I won't miss any changes
Julie	Yes; I won't have to make the changes.
Ann	Yes; it will be faster because the changes are already set up.
Jackie	Yes; it would conserve time—although I haven't used it and don't know details and quirks of program
Donna	Yes; I won't have to read all the changes and I'll be able to go right to the comments

- Is there anything about the current process that you would like to change?

Lisa	The amount of time it takes to get through the process.
Julie	It would be a lot easier if the proofer could make the changes.
Ann	The virtual office makes things difficult because they are so far away, and it takes so long to get their approval on changes. Also, I try to stay connected to what we consistently do, but I don't understand the reason behind some of our changes and I wonder if the people we send things to are wondering, "Why do they do that?"
Jackie	We need to come to a conclusion on changes—APA is correct, but some program specialists don't like the changes.
Donna	I'd like to have a list showing how we spell certain things or what gets capitalized, especially with weird words.

- Do you think an electronically edited document would help you do you job more efficiently? Why or why not?

Lisa	I think it will save time and prevent missing any changes.
Julie	Yes—I won't have to make the changes.
Ann	Yes. It will be faster because the changes are already set up.
Jackie	Yes; it would conserve time—although I haven't used it and don't know details and quirks of program.
Donna	Yes. I wouldn't have to read the entire thing—I could go right to the comments.

Appendix II

Journaling

Journaling—Questions

- How to turn it off so they can continue to work on document without highlighting.

- Why did the line indicating a change stay on after all changes were accepted/rejected?

  Turned out there was still a change that wasn't highlighted in red—deletions of spaces at end of row—so she couldn't tell there was still a change. Accepted change and line went away. Begin to "highlight formatting changes."

- Asked to turn off Track Changes before I saved and closed the document so they didn't have to do it.

- Wanted to send document back to originator showing changes from me and John but wanted to be able to distinguish between the two.

  Showed use of color-by-author function. Left John's changes in red and did my changes in blue.

- Why is it still tracking changes even though I've opened a new document?

  Never really figured out what happened, but showed her how to turn it off again.

Journaling—Observations

- If writer doesn't close document, I have to go ask them to or I can't open it for editing.

- I do more formatting changes.

- I make more comments.

- I make larger changes, like rearrange sentences or implement tables.

- I read through it more than I used to because I know I miss stuff on a computer.

- Find/replace is wonderful!

- Takes me longer to get through editing than it did on hard copy.

Appendix III

Post-Study Questionnaire

Post-study Questionnaire

- How has your attitude changed about electronic editing, if at all?

- How has your attitude about revising documents changed?

- Do you feel you are more efficient in producing the documents?

- Has the electronic editing process changed the amount of time you spend drafting/typing documents? How so?

- Has the electronic editing process changed how much time you spend implementing changes after the document has been proofed? How so?

- Is there anything in the new process you would change?

- Is the electronic editing process one you would like to continue with? Why or why not?

- Do you feel that some documents work better with the electronic editing process than others? Which ones? Why?

- Please provide any additional comments you have:

Post-study Questionnaire Results

- How has your attitude changed about electronic editing, if at all?

Lisa	I'm not so scared of it now. But I still worry that I might send out an attachment that has remarks on it.
Julie	Hasn't—I still like it. Wish I had it at home.
Ann	Yes—I think it's a lot quicker and there is less room for error.
Jackie	No.
Donna	Having the edits in red, changes marked clearly is very helpful. That makes revisions easier. So I was only a little skeptical at first.

- How has your attitude about revising documents changed?

Lisa	Still the same
Julie	I like that I don't have to do it all myself
Ann	It takes less time so there's more time for everything else.
Jackie	I don't really mind making revisions.
Donna	N/A

- Do you feel you are more efficient in producing the documents?

Lisa	No—Changes are already done so it's more efficient in that aspect. But sometimes changes are missed and not accepted/rejected and I don't notice till it's printed and I have to do it again.
Julie	Yes.
Ann	Yes.
Jackie	Not really—I have a harder time proofing and revising on the computer. I like to read the content with the changes—sometimes it's hard to get the "entire view" on the computer.
Donna	(let blank)

- Has the electronic editing process changed the amount of time you spend drafting/typing documents? How so?

    Lisa   No.

    Julie   Yes—I probably worry less thinking the proofer will do the work of changing the document.

    Ann   The drafting process time remains the same, but the correction/edit process is much quicker.

    Jackie   It takes about the same amount of time. Maybe a little longer, scrolling thought the document.

    Donna   No—because I want to send the draft as well done as possible.

- Has the electronic editing process changed how much time you spend implementing changes after the document has been proofed? How so?

    Lisa   Yes because the changes are already done.

    Julie   Yes—it takes less time to look at the changes and ok rather than make all the changes myself.

    Ann   Yes—I review all the changes and invariably select accept all changes and the process is complete.

    Jackie   Yes, it is much faster. The changes have already been made.

    Donna   I just say accept all changes-=unless it a reference I need to check. If it's grammar, I know you're right.

- Is there anything in the new process you would change?

    Lisa   No.

    Julie   No.

    Ann   How do I print the changes (in color) before I accept them for those people who would like to see what has been edited?

    Jackie   No.

    Donna   When the draft comes back, I have to open it to see how much time it's going to take. Could we get them back already printed?

- Is the electronic editing process one you would like to continue with? Why or why not?

Lisa	Sure. But it was nice to see the changes I need to make by just glancing at the paper rather than having to pull it up to decide if I had time at that point to make corrections.
Julie	Yes—much easier for me.
Ann	Yes—it's faster and more accurate.
Jackie	If it is easier for you Leonora. For me, it's nice to look at paper vs. computer screen. However, I think it does save paper and is more error free. I see advantages to both and disadvantages.
Donna	Sure—it's more precise.

- Do you feel that some documents work better with the electronic editing process than others? Which ones? Why?

Lisa	For the ones I do, I don't see much difference.
Julie	No.
Ann	Yes—it's much better than the non computer process that we had. This new edit system is the only one that I am familiar with.
Jackie	No.
Donna	I haven't noticed a difference.

- Please provide any additional comments you have:

Lisa	(left blank)
Julie	I like it—keep using it—less time for us.
Ann	Thank you for making our workload simpler and more timely and efficient. I appreciate it.
Jackie	I think that electronic editing is more "error proof" overall—it cuts down on mistakes. I'm still getting used to it. Thanks!
Donna	Reiterating—the comments *are* helpful. Thanks for mot making me feel stupid when I have a ton of errors.