"FORM EVER FOLLOWS FUNCTION":* USING TECHNOLOGY TO IMPROVE FEEDBACK ON STUDENT WRITING IN LAW SCHOOL

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I. INTRODUCTION

Critiquing student papers is an important responsibility of many law professors, including those who teach first-year and advanced legal-writing courses and professors who teach courses that include writing assignments.[1] Providing feedback on student writing is time consuming and intellectually challenging.[2] In most situations, the professor must

1 *See, e.g.*, Linda L. Berger, *Applying New Rhetoric to Legal Discourse: The Ebb and Flow of Reader and Writer, Text and Context*, 49 J. LEGAL EDUC. 155, 177, 179 (1999); Jane Kent Gionfriddo, *The "Reasonable Zone of Right Answers": Analytical Feedback on Student Writing*, 40 GONZ. L. REV. 427, 429-30 (2004-2005); Mary Kate Kearney & Mary Beth Beazley, *Teaching Students How to "Think Like Lawyers": Integrating Socratic Method With the Writing Process*, 64 TEMP. L. REV. 885, 897 (1991); Richard K. Neumann, Jr., *A Preliminary Inquiry into the Art of Critique*, 40 HASTINGS L.J. 725, 743 (1989).

2 *See, e.g.*, Linda L. Berger, *A Reflective Rhetorical Model: The Legal Writing Teacher as Reader and Writer*, 6 LEGALWRITING: J. LEGAL WRITING INST. 57, 57 (2000); Anne Enquist, *Critiquing and Evaluating Law Students' Writing: Advice from Thirty-Five Experts*, 22 SEATTLE U. L. REV. 1119, 1125-29 (1999) [hereinafter Enquist, *Advice from Experts*]; Anne Enquist, *Critiquing Law Students' Writing: What the Students Say Is Effective*, 2 LEGAL WRITING: J. LEGAL WRITING INST. 145 (1996) [hereinafter Enquist, *What Students Say*]; Steven J. Johansen, *"What Were You Thinking?": Using Annotated Portfolios to Improve Student Assessment*, 4 LEGAL WRITING: J. LEGAL WRITING INST. 123, 125 (1998). *See also* Ass'n of Legal Writing Dirs. & Legal Writing Inst., 2006 Survey Results, *available at* http://www.lwionline.org/survey/surveyresults2006.pdf [hereinafter ALWD/LWI 2006 Survey] (responses to

diagnose the major analytical flaws in the student's draft and provide the student adequate guidance to rewrite the paper.[3]   Therefore, the professor should carefully consider the content and form of feedback that will be most efficient for the professor and most helpful to the students.[4]

While the focus of critique should be on the substance of the feedback, professors should also consider the form of the critique to ensure that they are providing the necessary guidance to students effectively and efficiently.[5]   If professors develop the right format for their critique, they will be better able to provide students with complete analytical guidance.   Developing the best critique format will also help students benefit from the substance of the feedback.

When determining the most effective and efficient mode of critique, professors have a variety of formats they can use to provide their comments on student assignments, ranging from handwritten comments to electronic comments embedded in the student drafts.   Often

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questions 53 and 54 show that the average legal writing teacher provides feedback on 1,204 pages of student writing each year); Jo Anne Durako, *A Snapshot of Legal Writing Programs at the Millennium*, 6 LEGAL WRITING: J. LEGAL WRITING INST. 95, 107-09 (2000) (using the results of the 1999 ALWD/LWI Survey to compare the workload of legal writing and doctrinal professors); Gionfriddo, *supra* note 1, at 441 n.55 (discussing the 2004 ALWD/LWI Survey Highlights).

[3]   Most often, professors should prioritize their critique by focusing the comments on draft assignments on analysis and basic organization, leaving comments on basic writing issues for final drafts. *See* Daniel L. Barnett, *Triage in the Trenches of the Legal Writing Course: The Theory and Methodology of Analytical Critique*, 38 U. TOL. L. REV. 651, 654-59 (2007) (explaining that comments on draft assignments should focus on substantive issues); Berger, *supra* note 2, at 72-76 (explaining that professors must first help students develop their ideas); Gionfriddo, *supra* note 1, at 437 n.37 ("[L]aw practice writing . . . depend[s] upon accurate and precise analysis based on legal authority; thus, in giving comments in either context, a teacher does the student, and ultimately the legal profession, a serious disservice if she does not correct fundamental errors in the student's legal analysis."); Kearney & Beazley, *supra* note 1, at 898 (explaining that professors should focus on analytical comments in earlier drafts); *see, e.g.*, Neumann, *supra* note 1, at 744-45 (explaining that an important goal of critique is to develop ideas); Carol McCrehan Parker, *Writing Throughout the Curriculum: Why Law Schools Need It and How to Achieve It*, 76 NEB. L. REV. 561, 568-73 (1997) (explaining that professors must help students with their understanding of the underlying legal analysis at the draft stage in order for students to produce clearly written final documents).

[4]   *See* Barnett, *supra* note 3, at 659-74 (discussing how to provide analytical critique).

[5]   *See, e.g.*, Barnett, *supra* note 3, at 669-70 (explaining importance of mechanics of critique); Christina R. Heyde & Susan E. Provenzano, *E-Grading: The Pros and Cons of Paperless Legal Writing Papers*, 12 PERSP.: TEACHING LEGAL RES. & WRITING 139 (2004) (explaining that changing from a handwritten critique format to electronic critique allows more time to focus on substance of the critique).

handwritten comments are the first choice, and, although this method may provide some advantages, many professors handwrite comments without fully assessing different critiquing options. In addition, some professors use handwritten comments simply because they are intimidated by technology. Therefore, many professors have not considered the use of electronic critique and, as a result, professors and students are not benefiting from the advantages of electronic feedback techniques in their law school courses.[6]

The goal of this Article is to encourage law professors to examine the different critiquing formats available and to consider using some form of electronic critique. This Article does not promote the use of technology simply because it is available. Rather, while many considerations may support the use of either traditional or electronic critique methods, this Article encourages the use of technology because adopting an electronic critique format could help many professors be more proficient when providing comments on their students' writing.[7] Furthermore, advances in technology, coupled with the technological savvy and comfort level of today's student, probably will eventually dictate that all law professors who comment on student papers use some kind of electronic feedback. Therefore, professors should begin to evaluate how technology could improve their feedback on student assignments, and prepare themselves to use these tools.

To help law professors examine different formats for critiquing student work, Part II of this Article provides a quick comparison of the different methods of giving feedback on student papers in law school courses. Part III explores the variety of considerations professors should use when choosing the form of feedback on student assignments. Part IV explains how these considerations have convinced me to experiment with technology in providing critique in my first-year legal writing course. Finally, to help make the transition to electronic critique less

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[6]   *See* Joan MacLeod Heminway, *Caught in (or on) the Web: A Review of Course Management Systems for Legal Education,* 16 ALB. L.J. SCI. & TECH. 265, 280-89 (2006) (exploring reasons technology is not used more in legal education); Rogelio Lasso, *From the Paper Chase to the Digital Chase: Technology and the Challenge of Teaching 21st Century Law Students*, 43 SANTA CLARA L. REV. 1, 48-52 (2002) (explaining why technology should be used to enhance learning in law school); *see also* Suzanne Ehrenberg, *Legal Writing Unplugged: Evaluating the Role of Computer Technology in Legal Writing Pedagogy,* 4 LEGAL WRITING: J. LEGAL WRITING INST. 1, 2-3 (1998) (noting that, in 1995, technology had not enhanced legal writing instruction).

[7]   Heyde & Provenzano, *supra* note 5, at 140 ("Hands down, the most persuasive reason to move to a[n] [electronic critique] . . . is for convenience and efficiency.").

intimidating, Part V provides a guide to master the technical aspects of the current technology.

II. COMPARISON OF DIFFERENT CRITIQUE FORMATS

Law professors use a variety of techniques to give their students feedback on written work. These different methods can be divided into two basic categories: traditional hard-copy critique and electronic critique. Traditional hard-copy critique includes all types of critique that are made on paper copies of student assignments. Electronic critique consists of the different methods of imbedding critique in student assignments electronically.

Most professors have made comments on hard copies of student papers, but fewer have experimented with providing feedback on electronic versions of student assignments.[8] To determine which critique format is best for their teaching, professors should consider the advantages and limitations of both traditional hard-copy and electronic feedback. This Part will compare the benefits and drawbacks of the various options to help demonstrate that some form of electronic feedback provides most, if not all, of the benefits of traditional hard-copy feedback, and several additional advantages.

A. Traditional Hard-Copy Critique

Handwritten comments on hard copy is the time-tested method for critiquing student assignments.[9] Many law professors find that the most natural way to respond to student writing is to read hard copies of the documents and provide feedback in the form of hand written, typed, or recorded comments. Professors who practiced law before teaching often handwrote comments on hard copies of documents in practice.[10] In addition, most law professors learned to read documents in hard copy and have an easier time processing the information they are reading when handling the paper upon which it is written. The physical interaction between the professor's comments and the paper copy of the

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[8]   *See* Enquist, *Advice from Experts*, *supra* note 2, at 1137, 1143. Enquist discusses a 1999 survey of experienced legal writing professors, in which all 37 respondents indicated that they hand wrote margin comments on student papers. *Id.* Apparently, only one had "experimented" with electronic comments. *Id.*

[9]   *See supra* note 8 and accompanying text.

[10]   Enquist, *Advice from Experts*, *supra* note 2, at 1119 (explaining that most new law professors provide feedback to student writing in a manner similar to which they commented on documents in practice).

student's writing often helps the professor focus her comments and think about the best advice the student needs on the assignment.[11]

For many of the same reasons, receiving comments on the hard copy of the paper also helps many students process the information because they are accustomed to reading and working with ideas through hard copies of documents. The immediacy of comments on the hard copy often forces the student to reconcile the comments on the paper with the student's own expression of his ideas.[12]

There are a variety of forms that critique on paper copies of student assignments can take, including handwritten comments, typed comments, voice comments, and live conferencing. This Section will discuss the benefits and limitations of these traditional critique methods.

1. Handwritten Comments

Most new professors comment on their first papers by writing their comments on the paper copies of student assignments. When handwriting comments, professors often use a combination of short margin comments, editing revisions, and longer summary comments. This combination of handwritten margin comments along with editing suggestions and summary end comments can be effective.

For example, handwriting margin comments is an efficient way for a professor to react at the very point in the student's writing that needs a comment. Placing the professor's reaction on the margins next to the student's writing provides immediacy in the feedback that helps the student understand more fully the impact of his writing on the audience.[13] With handwritten comments, the professor can easily combine margin comments with specific revision suggestions by editing portions of the student's writing. The combination of short descriptive comments with an editing suggestion often helps demonstrate the professor's point more clearly to the student than a comment or editing change alone.[14]

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[11]   *Id.* at 1137-38.

[12]   *See* Barnett, *supra* note 3, at 662; Parker, *supra* note 3, at 582-83.

[13]   *See, e.g.*, Berger, *supra* note 2, at 84-90 (explaining that targeted margin comments are important to student learning); Heyde & Provenzano, *supra* note 5, at 141; Parker, *supra* note 3, at 582-83.

[14]   *See* Enquist, *What Students Say*, *supra* note 2, at 178 (noting that students seem to respond positively to the use of editing changes to illustrate a point in a written comment). However, legal writing professionals do not agree on whether editing student work is an

In addition to the margin comments and editorial revisions, professors can handwrite longer summary comments at the end of different sections and the overall paper. The summary comments allow the professor to develop the ideas in the margin comments more fully and to provide an overall assessment of the student's writing. By providing the suggestions in a longer comment at the end of the section or the paper in addition to giving margin comments, the professor may be able to better explain the student's problem and, therefore, fully explain how the student should focus his efforts on the revision.[15]

Handwritten comments have other advantages. Handwriting feedback may help some professors prioritize their comments because handwritten comments have to be fairly short and writing them can be physically demanding. The space limitations and physical demands of handwritten comments often force professors to carefully choose the issues from each student's paper to address in the comments.[16] This process of prioritization is an important part of giving helpful critique to students.[17]

Additionally, handwriting margin and summary comments helps the professor stay attentive as she works her way through the student papers. When working on a large set of assignments, staying focused is often challenging, so professors need to find a technique that helps them stay on task.[18] Margin comments provide a systematic way to work through the issues identified in each student's paper because the professor provides comments chronologically, as the professor identifies

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effective critique method. *See, e.g.,* Enquist, *Advice from Experts, supra* note 2, at 1156-62 (offering a discussion of editing student work); Beth Cohen *et al., Matching Goals and Methodologies: Commenting on Student Writing*, 14(1) THE SECOND DRAFT: BULL. LEGAL WRITING INST., Nov. 1999 at 2-3, *available at* http://www.lwionline.org/publications/ seconddraft/nov99.pdf (same); Steven D. Jamar, *Written Feedback on Student Writing*, 14(1) THE SECOND DRAFT: BULL. LEGAL WRITING INST., Nov. 1999, at 3, *available at* http://www.lwionline.org/publications/seconddraft/nov99.pdf (same); Kathleen Elliott Vinson, 14(1) THE SECOND DRAFT: BULL. LEGAL WRITING INST., Nov. 1999 at 10-11, *available at* http://www.lwionline.org/publications/seconddraft/nov99.pdf (same).

[15]   *See* Barnett, *supra* note 3, at 666-67 (offering a discussion of the advantages of summary comments at the end of sections in student papers and at the end of the entire paper); Enquist, *Advice from Experts, supra* note 2, at 1134-1136 (same).

[16]   *See, e.g.,* Ehrenberg, *supra* note 6, at 5 (explaining that typed comments make it too easy to write more than necessary).

[17]   *See* Barnett, *supra* note 3, at 654-59 (providing a discussion of the importance of prioritizing comments to student papers); Enquist, *Advice from Expert, supra* note 2, at 1130-32 (same); Kearney & Beazley, *supra* note 1, at 898 (same).

[18]   Enquist, *Advice from Experts, supra* note 2, at 1144-45 (explaining that using margin comments to interact with the paper helps teachers stay engaged because the comments are like a conversation with the student).

the areas that merit comment.[19] In addition, all the professor needs to critique the papers is a pen. Thus, taking the papers away from the office to work on the critique is easy. For some professors, a change of scenery when grading a large number of papers also helps them stay focused.

However, many of the advantages of handwritten comments are also shortcomings.   Although the immediacy of handwritten margin comments may be helpful to many students, writing comments in the margins can give the impression that the professor has taken control of the student's paper by writing all over it.[20] The visual impact of many comments written on the paper, no matter what the substance of the suggestions, gives the impression that the student has failed and the professor has taken over the writing.

Furthermore, margin comments naturally break up the writing and revision process for the student because they focus on individual issues in the paper. Providing several specific comments to individual issues may not allow the professor to fully reflect on the root of the various problems in the paper. For example, at first glance, it may appear that the problem is how a particular paragraph is constructed, but in fact the problem may be more systemic.[21] If the professor relies too heavily on margin comments, she may not take the necessary time to understand and explain the true problem.[22]   In addition, a student's ability to incorporate the separate comments in the revision process may be less effective because the student could have a difficult time using the comments holistically to bring the paper together. [23]

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[19]   However, not all students benefit from a chronological reaction to the issues in their papers. *See* Barnett, *supra* note 3, at 662-63 (containing a discussion of the benefits of using chronological narrative comments versus summary comments at the ends of sections).

[20]   Enquist, *Advice from Experts*, *supra* note 2, at 1140; Deborah Shore, *Let's Talk About It*, 14(1) THE SECOND DRAFT: BULL. LEGAL WRITING INST., Nov. 1999 at 8-9, *available at* http://www.lwionline.org/publications/seconddraft/nov99.pdf.

[21]   *See* Barnett, *supra* note 3, at 661-63 (offering a discussion of determining the analytical problems in student writing); Enquist, *Advice from Experts*, *supra* note 2, at 1130 (same).

[22]   *See* Barnett, *supra* note 3, at 669-70 (providing a discussion of the limitations of handwritten margin comments).

[23]   *See* Enquist, *Advice from Experts*, *supra* note 2, at 1140. Enquist quotes Professor Jane Kent Gionfriddo, who discusses the potential drawbacks of margin comments, explaining:

> [M]argin/interlinear comments do "fragment" the memo for the
> student in that they tend to focus the student on individual strengths
> and weaknesses.   They do this both physically and analytically.
> Writing in the margin may hinder the revision process by being a kind
> of physical or psychological barrier to the student's interaction with

The use of longer summary comments may help alleviate some of the shortcomings of margin comments. However, handwriting long summary comments is time consuming and physically exhausting. Therefore, handwritten summary comments may not be as complete as they should be to fully guide the student's revision.

Another limitation of handwritten comments is that making changes to them is difficult. As a professor works her way through a paper, she may realize that an earlier comment was not the best feedback to give the student. The only way to make changes to earlier comments is to erase them or cross them out. Confidence in the professor's feedback may be reduced by leaving erasure marks or crossing out comments on a paper. Finally, handwritten comments are often difficult for the student to use because handwriting can be hard to read. The last thing a student needs is to struggle with the readability of comments in addition to analytical challenges. [24]

2.   Global Comments

Distributing global comments to the entire class is another technique that many professors have found helpful.[25] Global comments describe common problems that the professor identified when reviewing the student papers. Providing a description of the problems the entire class encountered with an assignment often helps students identify and more fully understand the problems in their own papers and helps the students realize that they were not the only ones to make substantive mistakes in the draft. Global comments also provide the professor with an opportunity to clarify comments she was making on individual papers. After critiquing all the papers for an assignment, the professor may better understand how to articulate a comment she made on all the

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> what he or she originally wrote. It's difficult to work with a memo
> when all over every page the professor has written multiple
> comments, crossed out ideas, and used arrows to insert ideas.

Id. For this reason, using margin comments, in whatever form, may not be the best technique depending on the type of problems the professor identifies in the student's paper. In some situations, summary comments at the ends of sections in a paper or one narrative comment to the entire assignment might be a better vehicle for the professor to help the student with the revision. *See also* Barnett, *supra* note 3, at 661-63, 666-67, 670-71 (discussing the substantive considerations that should be used when determining if individual margin comments or summary-type comments should be used).

[24]   Enquist, *What Students Say*, *supra* note 2, at 177 (discussing student reaction to illegible comments).

[25]   Enquist, *Advice from Experts*, *supra* note 2, at 1143-44 (explaining use of "master comment sheets"); Johansen, *supra* note 2, at 131-32 (discussing the use of checklist comments); Cohen *et al.*, *supra* note 14; Jamar, *supra* note 14.

papers individually. Instead of attempting to revise all the comments on individual assignments, the professor can address the issue in the global comments.[26]

3.   Typed Comments

Instead of handwritten comments, the professor can provide typed comments in a separate document that is printed and attached to the student's paper when it is returned. The comments can be numbered and the corresponding number inserted by hand on the student's paper. Using this numbering technique allows the professor to type the margin comments in addition to providing longer summary comments at the end of sections and the paper overall.

This method is good for several reasons. In addition to being easy to read, typing comments in a separate document with numbered references provides the student with in-depth comments while leaving the student's own paper intact. Thus, the typed comments do not risk destroying the integrity of the student's work the way handwritten comments can.[27] Furthermore, separately typed comments require the student to read the comments in one document and apply the suggestions to his own writing. The process of incorporating the suggestions in separately typed comments helps the student work with the ideas more holistically and gives the student ownership of the revision process.[28]

Moreover, typed comments seem more authoritative and help show that the professor has given serious consideration to the student's writing. Demonstrating the care the professor has taken in providing feedback should help students feel encouraged to work with the professor's suggestions in the revision process and may help the comments feel less personally critical to the students than handwritten comments.

Furthermore, by typing, the professor will be able to process and refine the comments because she may insert comments in different places on the paper as she works through the student's assignment and

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[26]   *See* Barnett, *supra* note 3, at 671 (discussing the use of global comments); *see also* Cliff Zimmerman, *Keyed Comment Sheets*, 14(1) THE SECOND DRAFT: BULL. LEGAL WRITING INST., Nov. 1999 at 19, *available at* http://www.lwionline.org/publications/seconddraft/nov99. pdf (providing a discussion of "keyed" global comments to student papers).

[27]   *See supra* note 20 and accompanying text.

[28]   *See supra* note 23 and accompanying text.

may easily revise earlier comments, if necessary.[29]   If the professor realizes that an earlier comment is not valid because of something identified later in the student draft, the professor can simply delete or revise the previous comment.

Another advantage is that typing comments is faster for most people than handwriting comments. Therefore, the professor can provide more in-depth comments without spending a lot more time.[30] Thus, all of the comments, including margin suggestions and summary comments, can be more complete without being more fatiguing to write. However, because typing is so much faster than handwriting comments, there is a risk that the professor will overwhelm the student with comments that are too long and detailed.[31]

Typing comments also allows the professor to use master comments. Master comments are similar to global comments discussed above.[32] In a

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[29]   See Joel Schumm, *[Not Just] for New Teachers: Making Technology Work for You and Your Students*, 18(1) THE SECOND DRAFT: BULL. LEGAL WRITING INST., Dec. 2003 at 20, *available at* http://www.lwionline.org/publications/seconddraft/dec03.pdf.

[30]   *See* Schumm, *supra* note 29; Hazel Weiser, *Using the Autotext Feature of Microsoft Word to Create a Catalog of Writing Comments*, 14(1) THE SECOND DRAFT: BULL. LEGAL WRITING INST., Nov. 1999 at 17-18, *available at* http://www.lwionline.org/publications/seconddraft/nov99.pdf.   Professor Weiser notes that with typed comments her, "[I]ntelligence does not get twisted into shorthanding what should be a more comprehensive response to a student's effort. Instead I get to use my intelligence to craft effective analysis and concise explanations." *Id. See also* Heyde & Provenzano, *supra* note 5, at 141 (citations omitted). Professors Heyde and Provenzano noted the following difference between handwritten and typed comments:

> With paper grading, we always felt limited in our ability to write intelligent comments in the margins of papers. As a result, we often wrote short comments in the margins and tried to elaborate on those comments in notes at the ends of papers, with pages separating important explanations from corresponding writing problems. Electronic "margin notes" present our comments with more context and precision, because the computer associates each electronic margin note (written as Microsoft Word "comments") with a precise place in the document.
> . . .   Scrawled quickly and cramped, our handwritten margin comments could be, at worst, cryptic, illegible, or both, especially near the end of a full day's grading. At best, our handwritten comments were incomplete. Unfettered by poor handwriting or scarce margins, our electronic margin notes can neatly provide more detailed illustrations and clarify the "why" behind our comments.

Id. See also Barnett, *supra* note 3, at 663-66 (discussing why in-depth comments are important); Enquist, *What Students Say*, *supra* note 2, at 160-66 (same).

[31]   Ehrenberg, *supra* note 6, at 4 nn.6-7, 5 n.9 (explaining the risk of writing comments that are too long when typing feedback).

[32]   *See supra* notes 25-26 and accompanying text.

given set of papers, similar analytical or organizational issues may be common to a significant number of students. The professor can draft master comments addressing those issues in a separate document or using the feature of word processing applications that allows insertion of the same text in different places.[33] Instead of rewriting the comment for each paper, the professor can copy and paste the master comment at the appropriate place in the critique. The professor can easily tailor the master comment to address the specific problems in the student's writing.[34] The use of tailored master documents saves time and may help ensure fairness because the professor can provide the same guidance to all students who struggled with the same issue, yet respond to specific problems in a student's assignment so the comment relates to the strengths and weaknesses of the student's own writing.[35]

Typing comments and referring to them by number in the student's paper also allows for easy reference to a comment when the same problem appears more than once. If the professor identifies the same issue at different places, the professor can simply re-insert the number of the relevant comment at all appropriate points in the paper. Often, seeing that the same issue created problems in various parts of the draft is helpful for students to fully understand the issues that need to be addressed in the revision process.[36]

4. Live Conferences

Live conferencing is a technique in which the professor critiques the student paper during a professor-student conference. The professor reads and reacts to the paper as the student is meeting with the professor, thus avoiding the need to read and critique a paper and then

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[33]   *See infra* notes 120-21 and accompanying text (explaining how to use the auto text feature of Microsoft Word to insert macro comments).

[34]   *See* Heyde & Provenzano, *supra* note 5, at 140-41; Sarah E. Ricks, *Using Macros to Comment on Student Writing: A Little Technology Can Improve Consistency, Quality and Efficiency*, 19(1) THE SECOND DRAFT: BULL. LEGAL WRITING INST., Dec. 2004 at 8, *available at* http://www.lwionline.org/publications/seconddraft/dec04.pdf; Schumm, *supra* note 29, at 20.

[35]   *See* Ricks, *supra* note 34, at 8 (discussing the benefits of using the macro comment feature of word applications); Laurel Currie Oates, *The Paperless Writing Class*, 15(2) THE SECOND DRAFT: BULL. LEGAL WRITING INST., Jun. 2001 at 18, *available at* http://www.lwionline.org/publications/seconddraft/jun01.pdf (same); Weiser, *supra* note 30, at 17-18 (same); Heyde & Provenzano, *supra* note 5, at 141 (explaining that the use of master comments "eliminates the need to sift through previous papers to recall exactly how" a similar comment was phrased to other students).

[36]   *See* Barnett, *supra* note 3, at 668 (offering a discussion of the benefits of reinforcing ideas throughout the critique).

meet with the student after the assignment has been returned.[37]   This method provides the professor with instant feedback from the student and helps the professor understand if her comments are being received accurately. The give and take of this discussion often provides a more complete feedback experience.[38] When providing feedback in writing on substantive issues in a student's paper, the professor is guessing as to what the root of the problem is. In other words, the professor is attempting to get inside the head of the student through the student's written work.[39]   However, in a live meeting with the student, the professor is able to ask exactly what the student was attempting to explain in the paper or ask why the student chose a certain way of articulating his ideas. The student's response allows the professor to provide feedback to the actual problem, rather than reacting only to the words on the page.

In addition, the live conferencing approach provides the professor with an opportunity to fully explain her ideas to the student. Once the professor understands the student's specific problems, she may more easily provide targeted and thorough guidance. This approach often results in more substantively sophisticated feedback and helps the student work his way through difficult analytical problems during the conference. Making progress on the substantive challenges during the conference helps students more successfully rewrite the assignment.

Still, live conferencing has several important limitations. The use of live conferencing is difficult on graded assignments and impossible with anonymously graded assignments. Furthermore, some professors have difficulty reading student papers during a conference and reacting immediately to the student's work. Therefore, the professor may need to read the paper and take notes before meeting with the student. Taking notes on the paper before the conference creates more work and therefore eliminates much of the efficiency of live conferencing. In addition, if the professor reads the paper before the conference, the student does not receive the professor's immediate reaction, which is one of the main benefits of the live conferencing experience.[40]

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[37]   *See* Mary Beth Beazely, *Better Writing, Better Thinking: Using Legal Writing Pedagogy in the "Casebook" Classroom (Without Grading Papers)*, 10 LEGAL WRITING: J. LEGAL WRITING INST. 23, 56, 77-78 (2004); *see also* Jamar, *supra* note 14, at 4 (using live editing on a couple paragraphs of student drafts).

[38]   *See* Johansen, *supra* note 2, at 145.

[39]   *See* Gionfriddo, *supra* note 1, at 438 n.41; Johansen, *supra* note 2, at 142.

[40]   *See* Jamar, *supra* note 14, at 4.

Furthermore, if the professor is providing lengthy analytical comments during the critique, the student meetings probably need to be longer than traditional conferences because the professor needs time to critique the student paper and discuss her suggestions with the student.[41] This may end up taking as much time as both critiquing the memos and meeting students after they have received the critiqued papers. With a large class, it can take several days, if not a couple of weeks, to complete all the conferences. If the students are rewriting the papers, this time lag may be unfair for the students who are not able to meet with the professor until the end of the conference period.

Finally, some students are unable to take accurate notes during the conference. Without accurate notes of the meeting, students are not able to effectively use the feedback when rewriting the assignment. Even for students who seem confident during the conference about the issues that needed to be addressed, without sufficient notes to guide the revision process, they will not be able to effectively use the ideas they understood during the meeting. To avoid this problem, professors may need to provide a quick written critique in addition to the live conference. If a professor provides written comments, however, they may provide complete critique in writing and then again during the live conference. Providing two critiques on one assignment obviously lessens the efficiency of live conferencing.[42]

5.   Taped Comments

Some professors prefer recorded voice comments to provide feedback.[43] Voice comments allow the professor to provide extensive feedback quickly and efficiently. Professors can number comments on the hard copies of the assignments and record corresponding comments. With voice comments, the professor is able to have something similar to a conversation with the student about the student's writing. Therefore, voice comments provide many of the advantages of live conferencing in that professors can respond immediately to the students' writing and explain their reactions easily.[44] Because the professor is talking about the

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[41]   Johansen, *supra* note 2, at 145 (explaining that live conferences are time consuming).

[42]   Efficiency is critical to legal writing professors. *See* ALWD/LWI 2006 Survey, *supra* note 2, at 37-40 (responses to questions 53 and 54 show that the average legal writing professor provides feedback on 1,204 pages of student writing each year).

[43]   *See* Elisabeth Keller, *Audiotaped Critiques of Written Work*, 14(1) THE SECOND DRAFT: BULL. LEGAL WRITING INST., Nov. 1999 at 13-14, *available at* http://www.lwionline.org/ publications/seconddraft/nov99.pdf (providing a discussion of using recorded comments).

[44]   *See supra* notes 36-39 and accompanying text.

paper, rather than writing down her ideas, the comments tend to be more extensive and more conversational than written comments. Often, this combination of extensive reactions in a conversational voice forces the student to identify the underlying problem that caused the professor's reaction, which is a useful learning tool to help the student uncover the true problems with the paper. This process gives the student ownership of the revision process because he is not simply trying to write what the professor told him to.[45] Instead, the student is forced to identify and correct the problem on his own. Taking an idea from a voice comment and integrating the idea into the rewrite requires more analytical understanding by the student than a simple insertion of a suggested change.

In addition, with voice comments, students are required to take notes on the professor's comments to summarize the critique and make the revision process efficient. Otherwise, the student would have to listen to the same comments over and over. The process of summarizing the comments may be the main advantage of voice comments because the students are required to fully understand and boil down the professor's reaction. In written comments, the professor herself has often done this summarization process for the student. But giving the student the benefit of an extensive voice reaction to the student's paper, and then making the student summarize the suggestions, is an important step in correcting the problems for the revision.

Practically, voice comments give the professor many options of where to place comments and what approach to take on the critique. The professor may simply work through the paper chronologically and provide her reactions to the draft as she works through the paper using numbered comments. Or, the professor may decide that longer comments at the ends of sections may be best for a particular student, so the professor can read an entire section and provide one long comment for that section.[46] Professors also may provide some written margin comments and quickly make editing changes in addition to the voice comments.

Finally, voice comments may be physically easier for some professors. When recording comments, the professor is not required to sit at a desk, but may walk around with a portable recorder to record the

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[45]   *See* Keller, *supra* note 43.

[46]   *See supra* notes 15-23 and accompanying text (discussing different styles of commenting on student writing).

comments. Furthermore, taping comments eliminates the need to type extensive comments, so the risk of carpel tunnel stress and other physical problems caused by excessive typing are reduced.

Yet, there are several disadvantages to voice comments. First, the ability to make extensive comments may mean the professor does not prioritize her comments sufficiently.[47] The lack of prioritization may make the revision process more overwhelming for the student. Similarly, many professors use the writing process to perfect their comments. For those professors, voice comments may not provide the best format for their critiques.

In addition, the professor must be aware of the tone of her voice when recording comments. Being aware of the tone is particularly challenging at the end of a long and tiring day. Hearing fatigue in the professor's voice may give the student the wrong impression about the professor's reaction to the student's paper.[48]

Using voice comments also creates challenges when meeting with students to discuss their papers. With written comments, the students can bring in their papers and show the professor any comments which are unclear to the student. Referring to the paper is even possible with anonymous grading because the student can bring the paper and the comments to the conference. With voice comments, referring to the comments themselves is much more difficult.

B. Electronic Critique

Beyond traditional critique methods, current technology offers a variety of electronic critiquing options. Basic commenting and editing features of word processing applications allow professors to comment on papers electronically in much the same way they would provide feedback on hard copies of the assignments. Other features offer flexibility and other advantages over handwritten critique. Therefore, some type of electronic feedback may be an option for all professors, even those who are convinced of the advantages of traditional handwritten comments.

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[47]   *See supra* note 17 and accompanying text (discussing the importance of prioritizing comments).

[48]   *See* Barnett, *supra* note 3, at 672 (discussing the importance of the tone of critique).

1.   Electronic Typed Comments and Editing Changes

The easiest way to begin using electronic commenting is to use the features of word processing applications that allow the user to insert comments and make editing changes to the text.[49] These functions allow the professor to imbed margin and summary comments in the students' drafts and to make editing suggestions. The use of these features offers a technique that is similar to traditional handwritten comments and yet provides all of the benefits of typed comments.[50] The professor can insert short margin comments and editing changes at relevant places in the text and provide longer summary end comments where appropriate. To make a margin comment, the professor simply highlights text and then selects the option to insert a comment. The professor can insert shorter comments in "balloons" that appear in the margins and longer comments in the text of the student's paper.[51] For comments that do not fit in the balloons, the comment feature automatically puts the entire comment in footnote format at the bottom of the page. Thus, for the professor who has previously typed comments in a separate document and attached it to the student's draft, the only change would be to type the comments using the comment feature.

Using the comment function to insert comments has additional benefits compared to typing comments in a separate document. Inserting the comments at specific points in the student's writing as margin comments provides the benefit of immediacy that is a major advantage of handwritten margin comments.[52] Summary comments can be included as balloon comments or the professor can insert the comment by typing at the relevant point in the student's text. Because the professor is typing, all of the comments, even the shorter margin comments, tend to be more extensive and complete.[53]

In addition to inserting comments to the text, word processing applications allow the professor to give editing advice to the student

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[49]   *See infra* notes 118-22 and accompanying text (offering a discussion of how to use the features in Microsoft Word that allow insertion of comments and editing changes).

[50]   Heyde & Provenzano, *supra* note 5, at 141 (observing that "Electronic 'margin notes' present . . . comments with more context and precision, because the computer associates each electronic margin note . . . with a precise place in the document.").

[51]   *See infra* notes 119-20 and accompanying text (discussing the insertion of comments with Microsoft Word).

[52]   *See supra* notes 11-13 and accompanying text.

[53]   *See* Heyde & Provenzano, *supra* note 5, at 140.

using the "track changes" function.[54] This feature allows the professor to make deletions and changes to the document that are tracked and highlighted by the word processing application.[55]

Inserting typed comments electronically in the student assignments provides practical advantages. The professor can transport all of the papers in her laptop. Thus, the professor can easily critique the papers in any location where a laptop can be used.[56] In addition, electronic submission and return of student papers is simple.[57] Students can e-mail their assignments to the professor or a third party if papers are graded anonymously.[58]   Furthermore, most course websites include an assignment submission function where students can upload documents and receive critiqued assignments from the professor.[59]

2.   Embedded Electronic Voice Comments

The comment feature in Microsoft Word also allows the insertion of digital voice comments in documents.[60] In the same way the professor would insert a typed electronic comment, the professor highlights the relevant text and chooses the option to insert a voice comment. A small icon appears with recording controls that the professor uses to record the comment. Using this feature allows the professor to insert digitally recorded voice comments into places in the student draft where a comment would be helpful.[61] In addition, the professor has the option to use the track changes feature to make editorial suggestions.[62]

The voice comment feature provides all of the same benefits of taped comments.[63] In addition, the feature provides the flexibility to insert the

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[54]   *See supra* note 14 and accompanying text (discussing the benefits of providing editing changes with comments).

[55]   *See infra* note 122 and accompanying text (offering directions on how to track editing changes with Microsoft Word).

[56]   Heyde & Provenzano, *supra* note 5, at 140.

[57]   *See infra* notes 111-17 and accompanying text (discussing electronic submission and return of assignments).

[58]   *See infra* notes 116-17 and accompanying text (offering a discussion of preserving anonymity).

[59]   *See* Heminway, *supra* note 6, at 290-309 (discussing course websites).

[60]   *See infra* notes 123-24 and accompanying text (containing a discussion of inserting voice comments using Microsoft Word).

[61]   *See supra* notes 11-13 and accompanying text (discussing the benefits of precisely targeted comments).

[62]   *See infra* notes 118-22 and accompanying text (offering a discussion of editing documents using the "Track Changes" feature in Microsoft Word).

[63]   *See supra* notes 43-48 and accompanying text (discussing taped comments).

voice comments directly into the student's paper so the comment is more immediate than taped comments. Furthermore, inserting short comments throughout the draft is easier than with taped comments.

Finally, the major advantage of the voice comment feature is its flexibility when working on the student's paper. With taped comments, the professor has to record all comments chronologically. With the voice comment feature, the professor can go back and forth throughout the draft to insert comments where appropriate. This allows the professor greater flexibility when working through the critique. If the professor decides that she should have made a comment on an earlier page, she simply moves her cursor to that page and inserts a new comment.

Another advantage of the voice comment feature is that the comments may be copied and pasted into other documents.[64] Copying and pasting voice comments allows the professor to make global or master voice comments and copy and paste the comments at the appropriate place in student papers. This is not possible with taped comments.

Although the return of student papers should be simple when using voice comments because the student papers are returned as one document with all comments, the size of the files with voice comments creates several challenges. The files of the critiqued papers with the voice comments use a large amount of memory. Due to the size of the file, transferring the files between computers and uploading to websites can be difficult. Using e-mail to transfer the documents is also difficult, if not impossible. Uploading the files from a home internet connection, even a high-speed connection, can be time consuming.[65] Finally, the size of the files creates particular problems when attempting to back up the documents.[66]

Another problem with inserted voice comments is that the size of the files seems to make the documents unstable. Due to the instability, data can be lost when transferring the files. When this happens, the transferred file has corrupted voice comments, meaning the comments will not play. Most often the original file is not affected, but the copied

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[64]   *See infra* note 130 (offering directions on copying and pasting voice comments in Microsoft Word).
[65]   *See infra* notes 111-17 and accompanying text (detailing electronic assignment submission and return).
[66]   *See infra* notes 124-25 and accompanying text (discussing backing up student papers with electronic critique).

version has to be recopied. Finally, another consideration when using the voice comment feature is that Macintosh users may not be able to listen to the comments on their computers.

3.   Voice Comments with Digital Recorder

Recording comments with a digital recorder is another option for providing voice comments electronically. Digital recorders are stand-alone devices that are about the size of a cell phone. The devices have a microphone and record sound digitally. Using a digital recorder to record comments is much like using a tape recorder. The main difference with a tape recorder, however, is that the digital recorder allows the professor to provide individual comments to a student's paper that are numbered automatically by the device.[67] Therefore, the professor simply needs to add the number of the comment at the corresponding point in the student's paper. To allow for electronic return of the assignments, inserting the numbers into the student's paper can be done electronically by using the comment feature of the word processing application.[68]

The use of a digital recorder provides almost all of the advantages of electronically imbedded voice comments. The professor may insert comments at various places in the student draft. The professor also may insert comments at one point in the student paper, even if the professor has made comments later in the draft because the digital recorders include a function that allows insertion of new comments between previously recorded comments.[69]

The use of a digital recorder provides some benefits over the voice comment feature of word processing applications because it avoids some of the technical problems. The files are much smaller and can be zipped for ease of transfer.[70] Therefore, the instability problem of voice inserted

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[67]   *See infra* notes 126-29 and accompanying text (containing a discussion on using a digital voice recorder to make comments).

[68]   *See infra* note 119 and accompanying text (discussing inserting comments in Microsoft Word).

[69]   However, the digital recorder changes the number of all the comments following the newly inserted comment. Changing the number of subsequent comments requires the professor to change all the corresponding numbers on the student draft. Therefore, I have found that it is easier to simply record a new comment at the end of the voice comments and insert that number at the appropriate place in the student draft, even though the student will have to jump forward in the recorded comments to hear the correct comment. So, the comments on the student paper may not be chronological.

[70]   *See infra* note 128 (offering a discussion of zipping voice comments).

comments is not a concern.[71] In addition, the use of a digital recorder means the professor is not tied to the computer when making comments. The professor is free to get up from her desk and walk around as she makes comments. Finally, unlike the voice-embedded comments in Microsoft Word that can only be accessed by computers running PC software, digital recordings can be converted to play on all computer platforms and a variety of other digital devices, including iPods and MP3 players.[72]

The major disadvantage of digital recorders is that the comments cannot be embedded in the student's paper. Therefore, the professor must return the student's paper as one file and the digitally recorded comments separately. The return of separate files creates additional administrative burdens.[73]

III. CONSIDERATIONS WHEN CHOOSING A CRITIQUE FORMAT

The professor should consider many factors when determining the form of the feedback on student writing projects that will work best for the professor and students on any given assignment. Many of these considerations support equally the use of traditional hard-copy critique or some type of electronic feedback. Other considerations may weigh in favor of traditional handwritten commenting, while some factors support electronic critique. However, when considering the practical benefits of electronic methods, professors should at least consider experimenting with some form of electronic critique.

Many important considerations could support the use of electronic or hard-copy critique. For example, a primary consideration is the analytical goal of the comments. The amount and type of feedback that students may need varies from course to course and problem to problem. For instance, feedback on draft assignments in first-year writing courses to help the students rewrite the assignment may require long, in-depth comments because the focus is on the analytical issues of the student draft. First-year students often need detailed feedback when learning new reasoning skills.[74] In upper-level writing or seminar courses,

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[71]   *See supra* notes 66-67 (discussing the instability of voice-embedded comments).

[72]   *See supra* notes 66-67 (discussing the limitation of voice-embedded comments).

[73]   *See infra* notes 126-29 and accompanying text (containing a discussion of returning student papers with voice comments recorded with digital recorders).

[74]   *See, e.g.*, Barnett, *supra* note 3, at 663-66 (discussing amount of detail necessary for comments to provide adequate analytical guidance on draft assignments in first-year legal writing course); Gionfriddo, *supra* note 1, at 434-38 (discussing importance of guiding first-year students to accurate analysis in comments to draft student papers); Neumann, *supra*

however, the type of substantive help that students need will be different. In advanced courses, students may require more assistance with larger conceptual and organizational issues than core reasoning skills.[75] Electronic comments might be best for long, detailed comments, while handwritten comments could be the most practical technique for providing feedback with shorter specific comments.

Similarly, some assignments pose difficult analytical hurdles, while others may present basic organizational challenges. Therefore, the suggestions necessary to help the students deal with the different problems may affect the type of critique format the professor chooses. In addition, the type of feedback that will best help students may change as the course progresses. Because feedback later in a course will build on the ideas that were developed at early stages of the class, the detail of the professor's comments to students probably will change as well.[76]

Furthermore, the professor's own writing process and teaching style will affect the type of critique that is most effective for the professor. For many professors, providing feedback on student writing is as challenging as writing something themselves.[77] Therefore, the type of feedback a professor uses should help the professor develop her own method in providing effective comments to the students. Some professors are better at providing quick, reactive comments, where others may need more time to reflect on the ideas being suggested to students.[78] Handwritten comments may be the best vehicle for those who like to react quickly to student writing, while longer typed comments may help professors who use the writing process to clarify their ideas because they can use the word processing applications quickly and revise their ideas as they are writing them.

The fact that people process writing differently when reading documents from a computer screen than paper copies might convince some professors that traditional hard-copy critique is better for them and

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note 1, at 766-68 (noting that the goal of critique on drafts should be to assist the students with analytical issues).

[75]   *See* Philip C. Kissam, *Thinking (By Writing) About Legal Writing*, 40 VAND. L. REV. 135, 168-70 (1987) (encouraging use of drafts and rewrites of writing assignments throughout the law school curriculum to help students with their understanding of the analysis).

[76]   *See* Barnett, *supra* note 3, at 660 (discussing how critique should be tailored to the analytical challenges of the problems and timing of the assignment); Gionfriddo, *supra* note 1, at 453-55 (same); Johansen, *supra* note 2, at 126-29 (same).

[77]   Kearney & Beazley, *supra* note 1, at 897.

[78]   Barnett, *supra* note 3, at 662-63 (discussing that the critiquing process is different for each teacher); Berger, *supra* note 2, at 83-85.

their students. Research indicates that most readers process information at a slower rate when reading from a screen.[79] Furthermore, reading on a computer may focus the reader on small-scale issues instead of a larger idea.[80] Focusing on small details may mean that the professor does not give adequate guidance on overall organizational or analytical problems in her critique. Similarly, the students may have problems reworking global issues if they focus on small details in their papers at the expense of larger problems when processing the professor's comments on a computer screen.[81]

If the professor opts for electronic critique, she will need to develop strategies to avoid these problems.[82] However, because students are increasingly accustomed to reading from computer screens, these concerns may be more relevant to the professor than to students.[83] Nevertheless, as the professor reads more and more papers electronically, she will become more proficient at evaluating and commenting on what she reads electronically.[84]

While many factors could support the use of either traditional hard-copy or electronic comments, several considerations may tip the balance in favor of electronic critique. The learning styles of current law students have been affected by the integrated use of technology at home and in

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[79]   *See, e.g.*, Maria Perez Crist, *Technology in the LRW Curriculum: High Tech, Low Tech, or No Tech*, 5 LEGAL WRITING: J. LEGAL WRITING INST. 93, 106 (1999) (noting that reading from screen is often slower than text); Heyde & Provenzano, *supra* note 5, at 145 (noting that reading from screen is often slower and affects overall comprehension).

[80]   *See, e.g.*, Ehrenberg, *supra* note 6, at 7 (noting that reading from screen often prevents large-scale comprehension); Lucia Ann Silecchia, *Of Painters, Sculptors, Quill Pens and Microchips: Teaching Legal Writers in the Electronic Age*, 75 NEB. L. REV. 802, 817 (1996) (noting that reading from screen focuses reader on small sections of text).

[81]   *See, e.g.*, Ehrenberg, *supra* note 6, at 5, 7; Heyde & Provenzano, *supra* note 5, at 145; Molly Warner Lien, *Technocentrism and the Soul of the Common Law Lawyer*, 48 AM. U. L. REV. 85, 104 (1998); Silecchia, *supra* note 80, at 817.

[82]   *See* Heyde & Provenzano, *supra* note 5, at 145. Professors Heyde and Provenzano make several suggestions to help avoid these problems. *Id.* Specifically, Heyde and Provenzano suggest that professors can print out any paper that needs special attention and read it from the hard-copy to give the professor the necessary "bird's eye view" of the paper. *Id.* Professors also should take special care in class and student meetings to keep students focused on large-scale issues in assignments. *Id.* Similarly, professors should encourage students to print out their papers several times during the writing and revision process to help the students focus on large-scale issues. *Id.*

[83]   *See* Tracy L. McGaugh, *Generation X in Law School: The Dying of the Light or the Dawn of a New Day?*, 9 LEGAL WRITING: J. LEGAL WRITING INST. 119, 143-44 (2003) (noting that many students now entering law school are more accustomed to reading non-print resources).

[84]   Heyde & Provenzano, *supra* note 5, at 145.

education since most students were young children.[85]   Thus, working with electronic comments is the way they would naturally process information because they learned to read and write using technology.[86] By using a format they are accustomed to, students will have an easier time working with the feedback and, therefore, the comments will be more effective.[87]

The need to prepare students for law practice is another factor that supports the use of electronic critique.   Most lawyers revise documents electronically for inter-office use and to negotiate language of transactional agreements.[88]   Furthermore, many courts and administrative agencies are moving to a paperless system.[89]   Therefore, students need to learn how to manipulate documents electronically and process editorial and substantive suggestions in an electronic medium.

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[85]   *See*, *e.g.*, Lasso, *supra* note 6, at 1, 3 (2002) (noting, in 2002, that in a few years all entering law students will have had access to computers and the internet their entire lives); Heminway, *supra* note 6, at 283-89 (explaining that, to be successful, legal educators must take into account that current law students have used technology their entire lives); McGaugh, *supra* note 83, at 124-25; Silecchia, *supra* note 80, at 808 (noting that current law students have used technology at all levels of their education); Craig T. Smith, *Synergy and Synthesis: Teaming 'Socratic Method' with Computers and Data Projectors to Teach Synthesis to Beginning Law Students*, 7 LEGAL WRITING: J. LEGAL WRITING INST. 113, 114 (2001) (noting that many students expect technology to be used in teaching); Crist, *supra* note 79, at 97-100 (discussing the benefits and disadvantages of using technology in teaching law).

[86]   *See* Lasso, *supra* note 6, at 22-33 (discussing how technology affects learning in law school).

[87]   Heyde & Provenzano, *supra* note 5, at 142 (noting that students prefer electronic comments over handwritten comments); Oates, *supra* note 35, at 19 (noting that students praise electronic comments). *See also* Crist, *supra* note 79, at 97-100 (noting that students may learn better if the professor incorporates the use of technology in the instruction).

[88]   *See* Heyde & Provenzano, *supra* note 5, at 142; David Kiefer & Marc Lauritsen, *Recent Developments in Automating Legal Documents*, 52 SYRACUSE L. REV. 1091, 1096-97 (2002) (explaining use of technology in law practice to produce documents); *see also* Lien, *supra* note 81, at 126-33 (discussing how technology affects the way lawyers think about the law).

[89]   *See* About CM/ECF, http://www.uscourts.gov/cmecf/cmecf_about.html (last visited Aug. 08, 2007).   According to the Administrative Office of the U.S. Courts, the federal judiciary's case management and electronic case files systems are in use "in 98% of the federal courts: 93 district courts, 93 bankruptcy courts, the Court of International Trade, the Court of Federal Claims, the Court of Appeals for the 6th, 8th, and 10th Circuits, and the Bankruptcy Appellate Panel for the 6th, 8th, and 10th Circuits." *Id.; see also* Mary Wahne Baker, Note, *Where There's a Will, There's a Way: The Practicalities and Pitfalls of Instituting Electronic Filing for Probate Procedures in Texas*, 39 TEX. TECH L. REV. 423, 431-40 (2007) (commenting on Texas's possible move to an almost completely electronic probate process, while viewing other states which already allow e-filing in probate); Bradley Parker *et al.*, *The Paperless Deposition*, 20 UTAH B. J. 36 (Jan./Feb. 2007) (discussing the world's first paperless deposition).

Training students to use electronic comments in law school will help prepare them for practice.[90]

In addition, the use of electronic commenting might appear more professional to the students because the professor is taking advantage of technology to provide the feedback. By using advanced electronic critique techniques, the professor will appear to be an expert in current technology so the students will have confidence in the professor's expertise and feel well prepared with technologies used in law practice. Furthermore, by using the most advanced format of comments, it appears that the professor has taken the student's work seriously and has invested a substantial amount of time and thought into the critique.[91]

Moreover, the ease of electronic submission and return of student assignments provides efficiency and may soon be the norm expected in all law school courses.[92] For example, using electronic submission avoids the stress and administrative burden of collecting paper copies of writing assignments. Students may submit assignments from home, avoiding the mad rush to the law school to get the paper submitted before the deadline. The automatic time record of electronic submission also avoids the debate of when papers were actually submitted that sometimes occurs with hard copies of student assignments.[93] Similarly, electronic assignment return is easy.[94] Professors simply have to send the papers by e-mail or upload them to the course website. Most websites allow the professor to upload papers as she completes them and release all of the papers, with a grade, at the same time. Students are not required to be at the law school to receive their papers, but can instead access them from any computer connected to the internet. By uploading the assignments to the website, or sending them to students

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[90]   *See* Crist, *supra* note 79, at 96-97 (noting that technology is defining the skills lawyers need today to be competent in practice); Heyde & Provenzano, *supra* note 5, at 142-43 (explaining that electronic commenting helps prepare students for law practice); Richard A. Matasar & Rosemary Shiels, *Electronic Law Students: Repercussions on Legal Education*, 29 VAL. U. L. REV. 909, 913 (1995) (noting that law schools must use technology to prepare students for law practice); Silecchia, *supra* note 80, at 825 (noting that using technology in the classroom helps prepare students for law practice).

[91]   *See* Weiser, *supra* note 30, at 18 (noting that students feel that the professor values their work more when using electronic comments).

[92]   *See infra* notes 111-17 and accompanying text (discussing the ease of electronic submission and return of assignments).

[93]   *See* Heyde & Provenzano, *supra* note 5, at 140 (offering a discussion of the benefits of electronic submission of assignments); Schumm, *supra* note 29, at 20 (same).

[94]   *See infra* notes 117-18 and accompanying text (discussing electronic return of assignments).

via e-mail, the professor has an electronic copy and record of transmission for her files.

Finally, students seem to prefer electronic feedback because the comments are easier to work with and demonstrate that the professor values their work.[95] Although making students happy should not be the primary goal in teaching, if the use of technology helps students feel more positive about their writing experience in law school, their positive reaction to the use of technology should be considered when determining the best critiquing format to use.[96]

IV. DOES TECHNOLOGY ACTUALLY IMPROVE FEEDBACK ON STUDENT ASSIGNMENTS? ONE PROFESSOR'S EXPERIENCE

As a writing professor, the comments I provide on student assignments is a central part of my teaching. What I do in the classroom affects the type of comments I make on student assignments and the feedback I give in my critique informs what I do during class sessions and how I interact with students in individual meetings.   This relationship between my teaching and the feedback I give on student assignments has meant that the critique format I find most helpful is ever changing. Thus, I have experimented with almost every type of critique described in this Article. Although not all of the different formats have worked for me, each new experience has improved the feedback I give my students.

When I critiqued my first set of student papers as a new teacher, I did not consider any critique format other than handwritten comments. However, I soon had no choice but to contemplate other options for one simple reason: my students could not read my handwriting. Therefore, I began to type my comments, which was a much-improved method for me and my students. The success of my first experience using a new critique format has given me the courage to experiment with a variety of techniques over the last seventeen years of teaching first-year legal writing.

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[95]   *See* Schumm, *supra* note 29, at 20; Heyde & Provenzano, *supra* note 5, at 142 (explaining that many students have asked why all professors do not grade electronically); Oates, *supra* note 35, at 19 (noting that her students prefer electronic grading because it results in better quality feedback); Weiser, *supra* note 30, at 18 (noting that students feel that the teacher values their work more when electronic comments are used).

[96]   *See*, *e.g.*, Lasso, *supra* note 6, at 43-47 (noting the benefits of using technology to promote student enthusiasm for learning); Schumm, *supra* note 29, at 20 (noting that electronic comments help interest students in the legal writing class).

The form of critique I have found most helpful is directly affected by the substance of my comments.[97] I grade and critique several draft assignments in my first-year legal writing class over the course of two semesters. The goal of the critique is to provide students the necessary guidance to successfully rewrite the paper. Each assignment is designed to help students learn a variety of analytical skills, beginning with case synthesis in the fall semester and ending the year with the creative use of legal reasoning to make persuasive arguments. Therefore, my comments are usually in-depth analytical suggestions to help students recognize flaws in their analysis based on relevant authority.[98] To be effective, I vary the type of feedback I use to challenge students to work with their ideas, much like I do in class discussions. In most feedback, I provide a combination of fairly directive comments with more open-ended Socratic questions that challenge students to rethink their analysis.

A. Changing from Handwritten to Typed Comments

Like a lot of new legal writing professors, I wrote my comments in the margins of the students' papers when I critiqued my first set of papers.[99] Handwritten margin comments seemed natural to me because I had always received comments on my own writing in law school and in practice in this way.   Furthermore, handwritten margin comments seemed like an effective way to provide comments because it allowed me to react to students' writing in the same way I had commented on documents in law practice.[100]

I quickly realized, however, that handwriting suggestions to my students was not practical because my handwriting is not very legible. I spent much of my time in conferences reading my comments so students could understand them.   Although the students were very patient, deciphering my writing was not how I wanted my students spending their time. I wanted them to focus on the substance of my comments. Therefore, in my first semester of teaching I was forced to change my critique format to improve the experience for my students.

For the next assignment, I purchased a personal computer and I began typing my feedback. I typed numbered comments in a separate

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[97]   *See infra* notes 73-76 and accompanying text (discussing how the analytical goals of the critique affect the type of feedback that should be given).

[98]   *See supra* note 3 and accompanying text (offering a discussion of analytical critique).

[99]   *See supra* notes 8-13 and accompanying text.

[100]   *See supra* notes 8-24 and accompanying text (discussing hand written margin comments).

document and handwrote the number in the margins at the relevant points in the students' papers. I printed my comments and stapled them to the students' assignments. When making comments, I forced myself to not write anything other than the number of the comments in the margins so all comments were typed, though I did allow myself to make some editing changes by hand if I thought editing suggestions would be helpful.[101]

The benefits of typing my feedback were apparent after commenting on just a few papers. In addition to making my comments legible, typing the comments was much easier on me physically. Furthermore, the substance of my feedback improved because I could easily revise my comments. I learned that, as with all writing, it helped to think through my ideas in writing when I was providing comments on the papers. Thus, typing the comments allowed me to engage in this type of process writing when providing feedback to my students.

In addition, I was able to change comments on all the assignments if necessary. Sometimes when I was almost done critiquing the assignments, I realized that I should have been saying something differently. Using typed comments, I could easily go back and revise my feedback on earlier papers. I also quickly noticed how easy it was to refer to the same numbered comment at several different places in the student's paper. If I saw the same problem in more than one place, all I had to do was add a margin comment telling the student to refer to the relevant comment by number.

The result of the change was that my comments were much more substantive on the papers in the spring than they had been when I handwrote my comments in the fall. Typing the comments allowed me to provide longer comments that reflected the type of teaching I did in class because I could type much more detailed comments than I was able to handwrite on the students' papers. Some comments were very direct on what changes needed to be made, while other comments were open-ended to challenge the students' reasoning. The students found the in-depth typed comments more helpful than the shorter handwritten suggestions. Furthermore, my conferences for the spring assignments focused on the substance of my feedback and how the students needed to work with my suggestions in the revision process, rather than on questions about what I had written or meant with the shorter handwritten critique in the fall.

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[101]   *See supra* notes 26-36 and accompanying text (discussing typed comments).

I also found that my students were more willing to accept my suggestions with the typed comments. They seemed to take the feedback much less personally than they had when I handwrote the comments. This was most likely because the criticism felt less personal and the suggestions more authoritative when I took the time to type out my ideas in longer complete comments.

Therefore, the next year I continued to type my critique and began to experiment with master comments.[102] Often, all of my students struggled with similar analytical problems on the draft. I began writing comments about several issues that I saved in a master document. For most drafts, I could copy and paste the basic comments into my feedback and tailor the comments to each paper. I found that using master comments in this way helped me provide consistent analytical advice to all students and it saved me time. Soon, my comments were even more in-depth and the guidance the students received was much more helpful, though increasingly challenging.

For some assignments, I prepared global comments for distribution to the entire class as a supplement to the individual feedback.[103] I sometimes referred to these global ideas in my critique on specific papers. Eventually, I began to distribute annotated samples with comments that were similar to the types of comments I provided on critiqued assignments.[104] Using annotated samples with numbered comments helped the students become accustomed to my system of feedback before receiving my comments on their first assignment. It also allowed me to refer to annotations in samples by number in my critique. Referring to annotations in the samples often saved me time and helped clarify my comment by sending the student to a specific place in a sample that we had discussed in class.

B.   *Experimenting with Live Conferences*

As I continued to type my comments, several of my colleagues decided to experiment with taped comments. They felt the experience was good for them and their students because taping the feedback allowed them to have more of a conversation with the students about

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[102]   *See supra* notes 32-36 and accompanying text (offering a discussion of using master comments).

[103]   *See supra* notes 25-26 and accompanying text (discussing global comments).

[104]   *See* Judith B. Tracy, *'I See and I Remember; I Do and Understand': Teaching Fundamental Structure in Legal Writing Through the Use of Samples*, 21 TOURO L. REV. 297, 330-31 (2005) (containing a discussion about using annotated samples).

their writing. The conversational format seemed to allow longer, more in-depth comments than typed comments. I liked the idea of having a conversation with my students in my critique, but I resisted moving to taped comments because I like the ability to use comments from a master document and revise them for each student. With taped comments, I would not have been able to use master comments in the same manner I found effective with typed feedback.

Nevertheless, my colleagues' success with taped comments convinced me to experiment with live conferences where I could have an actual dialogue with my students about their papers.[105] I decided to begin this experiment with the first assignment of the year which is ungraded.

After my first set of live conferences, I felt that the technique was very successful. I thought my comments were much more focused on the students' needs because I could ask them about their ideas as I was reacting to their writing. Often, the problem that I had identified as the main problem was not the true underlying deficiency in their reasoning process. By asking questions about the issue I thought was the root of their problem, I was able to help identify the true flaw. The give and take of our conversation helped me focus my comments on their specific problems.

However, when I received the revisions of the assignments, I was less convinced that the technique was best for me. Even though I felt just as positively about my conferences, the students, as a group, were not as able to incorporate the ideas from our conversations into their revisions as well as they had when my students received my typed comments. The problem seemed to be that the students had not successfully taken notes during our conference that would help them make the necessary changes in the rewrite.

Therefore, the following year I read the papers before the conference so I could give the students some written comments about the major issues that needed to be addressed. I gave the students a copy of these comments during the conference so they could use them to take additional notes to be used in the revision. The quality of the rewrites improved, but the combination of critiquing the memos before the conference and the additional time I needed for each conference meant that I spent much more time on the drafts than I had when I typed my

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[105]   *See supra* notes 36-42 and accompanying text (discussing live conferencing).

comments. Yet the result on the rewrites was about the same. I therefore decided to abandon the use of live conferences.

C. Going High Tech: Electronically Embedded Voice Comments

During a meeting with our Educational Technology Specialist, I explained that I had decided to stop using live conferences. After listening to why I liked live conferences, she suggested that I consider using electronically-embedded voice comments.[106] As we talked, she convinced me that using this new technology might allow me to develop a critique technique that included some of the benefits of live conferences, but still provided my students with the necessary record of my comments to help guide their revision. I was also convinced that the concerns I had with the limitations of taped comments would be alleviated because I could insert separate voice comments at various places in each draft and I could also copy and insert global comments as needed. Finally, she sold me on the idea when she explained that the assignment module of my course website made submission and return of the assignments with electronic critique very simple.

I must admit that initially the technology was intimidating. I had to purchase several peripherals, including an external sound card, a separate microphone, and a USB drive to back up the files. I was required to familiarize myself with the voice insertion function of Microsoft Word to embed my voice comments throughout the students' drafts. I also had to master the feature to insert typed margin comments and editing suggestions. It seemed like a lot to learn.

After working on just a few papers, however, I became fairly comfortable with the technology. And my experience critiquing the first set of assignments for the class convinced me that voice comments were a good way for me to give feedback. It was easier for me physically than typed comments. The number of papers that I could critique in one day increased. I also felt that the substance of my comments was better than when I typed them because I provided more in-depth guidance with the voice comments.

The main difference with the substance of my voice comments and my typed critique was that voice comments allowed me to quickly provide a variety of suggestions about a deficiency in the student's paper. When I identified a problem area, I gave guidance based on what

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[106]   *See supra* notes 60-67 and accompanying text (offering a discussion of using voice-embedded comments).

I thought was the root problem, but I would also explain what the student should consider if my understanding of the problem was incorrect. Providing alternative suggestions to the same problem was more similar to the kind of feedback I had provided in live conferences than that in typed comments. With typed comments, I usually made a decision about what the student's problem was and provided a comment based on that assumption. Although I would explain my assumption to the student, I was less willing to provide alternative suggestions. I think my unwillingness to provide different suggestions when typing the comments was twofold. First, it took a lot of time. Second, I felt less willing to include such conversational comments in writing. When speaking to the student through the voice comments, however, I was more willing to explain what I was unsure of and therefore provide several different suggestions.

My students also like the electronic voice comments. They seem to work with my feedback more holistically and take ownership of problems much more than when I handwrote or typed my critique. Therefore, the quality of the class discussions, individual conferences, and rewrites improved. I spend much less time answering questions about my voice comments than with typed critique. In fact, rarely do students say that they do not understand something in the voice comments. With typed comments, about 10 percent of my time was spent clarifying comments during student meetings. With voice comments, when the students prepare for our meeting, they must listen to the feedback and take notes on each comment. In addition, the fact that I provide alternative suggestions in my voice comments helps many students think about different ways to improve their drafts. This process of summarizing my different suggestions seems to force the students to figure out on their own what point I was making in the comment. Therefore, the students are much further along in the revision process when they come to see me than they were with my paper comments. Thus, I spend much more of my post-critique time discussing how the student plans to correct the problems rather than re-identifying the issues that I raised in my initial feedback. Focusing on the rewrite rather than the comments on the draft means that the conferences are much more substantive and productive.

In addition, the student rewrites are better when I use this combination of voice comments, short typed margin suggestions, and editing changes. This combination of critiquing techniques seems to provide the right type of feedback for most students because it has many advantages of other critique types, including the immediacy of margin

comments, the professional appearance of typed comments, and the thoroughness of live conferences. In many ways, voice comments provide the ability to have a conversation with the student much like a live conference, with the added benefit of having time to reflect on comments. Furthermore, the student is able to take sufficient notes on the suggestions because the student can listen to the comments several times.

D. *Technical Glitches Force Another Change: Digital Voice Recorder*

Overall, I think the best technique for my critique is to embed voice comments in student drafts and supplement them with short typed margin comments and editing changes. The ability of the students to read their papers and hit an icon in the text to hear my comment provides immediacy to the feedback that is very helpful. However, I have experienced serious technical difficulties when using voice-embedded comments with Microsoft Word. The size of the files seems to cause problems when transferring files from my hard disk to the backup location or the website. Several times, the voice comments have been corrupted during this transfer process.[107] Although we have been able, eventually, to obtain an uncorrupted version of the paper from my hard drive, the administrative burden of transferring papers more than once persuaded me to record my comments using a digital voice recorder.[108]

Using a digital voice recorder provides many of the same benefits of embedded voice comments without the technical problems of large files.[109] The digital recorder assigns a number to each comment, so I place the number of the voice comment in the student's paper by inserting a typed margin comment with Microsoft Word. This technique still allows me to give as many individual comments as I want on each paper and to insert the reference to the comment where appropriate on the student's paper. However, when returning the papers, the digital recorder comments are separate from the student's paper. The students receive their critiqued paper and the various voice comments in one folder. When working through my feedback, they must read their paper and then listen to the relevant voice comments.

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[107]   *See supra* notes 64-66 and accompanying text (detailing the technical challenges present when using voice-comments in Microsoft Word).

[108]   *See supra* notes 67-73 and accompanying text (discussing using digital recorders to record voice comments).

[109]   *See supra* note 107 and accompanying text.

Although I prefer the immediacy of embedding the voice comments in the student's draft, there are advantages to the digital recorder comments. The digital recorder is completely portable and about the size of cell phone so I am able to get up from my computer when recording my comments. Being able to make comments while walking around the room has had a positive effect on the substance of my comments. I think my digital voice recorder comments are even more conversational than the voice comments I made with Microsoft Word. The conversational nature of my feedback seems to please my students and help them work with my suggestions in the revision process. In addition, transferring the files is much easier because the comments can be zipped and take little memory.

V. MASTERING THE TECHNOLOGY FOR ELECTRONIC CRITIQUE

Although learning the different electronic critique formats may seem intimidating, current technology is user friendly and makes giving electronic feedback fairly easy. The small investment of time to master the technology should pay off on the first set of papers the professor critiques. To ensure a smooth transition, the professor should have a system for electronic submission and return of the papers. In addition, the professor must determine the best method to provide and back up the electronic feedback.

A. *Electronic Submission and Return of Student Papers*

Electronic critique allows the professor to receive and return student assignments electronically. Two of the easiest ways to accomplish electronic assignment submission and return are course websites and e-mail. However, with both types of electronic submissions, the professor must take some precautions to assure that students submit the correct document and that personal information is removed on anonymously graded assignments.[110]

1. Website Submission

Most of the current course websites include a function for assignment submission and return.[111] Students enrolled in the course sign on to the website and post their assignments. The professor then

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[110]   *See infra* notes 114-15 and accompanying text (containing information regarding the submission of incorrect documents); *infra* notes 116-17 and accompanying text (offering assistance in assuring that personal information is removed).

[111]   *See* Heminway, *supra* note 6 (discussing course websites).

downloads the assignments from the website and can manipulate them as they wish. When the professor has commented on the paper, the professor posts the assignment back to the website and the student downloads the critiqued assignment from the site. To use website submission in courses graded anonymously, there must be a website for assignment submission where students use their exam or student numbers to obtain access to the website.

In addition to the ease of submission and return, using website submission creates a record of submission time and provides an automatic backup of the students' papers and the professor's comments. Some course website assignment submission features allow the student to request an e-mail receipt verifying the date and time of submission. Furthermore, professors and students may obtain access to the assignments anywhere they have internet access. Finally, most websites can handle large file transfers, so the size of the documents is not a problem when using website submission.[112]

2. E-mail Submission

For some professors, e-mail submission and return may be the easiest method of obtaining and returning student papers because the professor only has to have students send an e-mail with the document attached. This may be the best option for small classes if the professor chooses a form of electronic critique that does not create large files. Large files can be difficult to send via e-mail and some e-mail systems limit the size of files that can be sent through the system. In addition, professors who grade anonymously would need to have students send assignments via e-mail to a third party. The third party would download the assignments, remove all personal information from the documents, if necessary, and forward the documents to the professor.[113]

3. Submission Precautions: Submission Errors and Document Information

With electronic submission, professors must establish procedures to avoid submission of wrong documents and to remove personal information on documents if the assignments are graded anonymously. Because it is possible that students could submit the wrong document

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[112]   *See supra* notes 64-66 and accompanying text (offering a discussion of the problems caused by the large amount of memory embedded voice comments use).

[113]   *See infra* notes 116-17 and accompanying text (discussing the preservation of anonymity while utilizing electronic submission).

when using electronic submission, they must be instructed to carefully verify that the correct version of their assignments is being submitted electronically. Most students are accustomed to submitting important documents on-line, including law school applications, so verifying that they are uploading the correct document is not new.[114] Furthermore, lawyers in practice must verify that they are submitting the correct version of all documents when distributing transaction documents or filing papers electronically with courts and administrative agencies.[115]

For anonymously graded assignments, the professor also must take some precautions to ensure that identifying information is not included on the assignments submitted.[116] There are several techniques to remove personal information from documents produced with word processing applications, but none has proved completely successful. Thus, a multi-step check is probably best to ensure that the professor does not receive documents with identifying information. To begin, professors should have students use a template that the professor prepares for each assignment. The professor should post the template on the website for students to download and use to draft their assignments. On this template, the professor should provide the heading and basic formatting for the document and select the option to remove all personal information when the document is saved. Even when this option is selected, some documents may still include personal information when the document is sent by e-mail or uploaded to a website. Therefore, a third party should download the assignments and check each one to

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[114] In the four years that I have used electronic submission, my students have submitted approximately 1000 assignments electronically. Only one student has uploaded the wrong version of an assignment. If a student uploads the wrong assignment, I consider it late and the student is penalized accordingly. *See* Heyde & Provenzano, *supra* note 5, at 144 (offering suggestions on dealing with students uploading the wrong document).

[115] *See* LR, D.Mass 1.3 read in conjunction with LR, D.Mass 5.4. For example, local rules for the United States District Court for the District of Massachusetts state that a judicial officer may impose dismissal, default, or other sanctions for errors made while electronically filing documents. *Id.*

[116] If format of the document is not a concern, the use of exam software is another solution for submission of anonymously graded assignments. Exam applications have a function that removes all identifying information from the documents submitted by students. Most exam software can be used for take-home exams, so the professor can allow submission over a long period of time. However, currently, most exam software alters the format of the documents submitted. Therefore, if citation form or other formatting is a concern, using exam software is not the best option.

remove any personal information.[117] After all the documents have been checked, the professor can obtain the documents from the third party.

4.   Assignment Return

If using e-mail, return is as simple as sending each student an e-mail with the critiqued assignment and any accompanying documents attached to the message. Using the website is easy as well, especially if the website applications allow the professor to post the critiqued assignment and any accompanying files to student folders.   Most applications include a release date function, so the assignments can be posted as they are completed, but released to the students at the same time. Some applications also include a grading component where the grade on the assignment can be posted on the website when the student's paper is released. Each student only has access to his paper and grade.

B.   Using Electronic Critique Functions of Word Processing Applications

1.   Electronic Typed Comments and Editing Changes

The comment feature of Microsoft Word makes providing typed margin suggestions, summary comments, and editing changes simple. To make all three types of comments, the user needs to begin by adding the reviewing toolbar.   To add the reviewing toolbar, click "View," highlight "Toolbars," and select "Reviewing."   Once the reviewing toolbar is added, the user should select the track changes option when beginning to critique a student's paper.[118]

To provide a margin comment, the user simply highlights the relevant text and selects "Insert Comment."[119] An icon will appear with

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[117]   *See* Microsoft Office Online, http://office.microsoft.com/en-us (click on the Products tab; then follow the hyperlink for Word; then search "Remove Hidden Data and Personal Information From Office Documents") (last visited July 09, 2007). Personal or hidden data can be removed from a document opened in Word 2007 by clicking the "Microsoft Office" button, pointing to "Prepare" and then clicking on "Inspect Document." *Id.* Once inside the document inspector dialog box, you simply check the boxes that correspond to the type of information wish to search for and then click "Inspect." *Id.* When the search is complete, click the "Remove All" button next to the results for the types of data which you would like removed from the document. *Id.*

[118]   *See infra* notes 120-23 and accompanying text (offering a discussion of the "Track Changes" feature in Microsoft Word).

[119]   *See* Microsoft Office Online, http://office.microsoft.com/en-us (click on the "Products" tab; then follow the hyperlink for "Word"; then search "Insert or Delete a Comment") (last visited July 12, 2007). To insert a text comment using Word 2007, select or

the initials of the user and a new window will appear at the bottom of the page in the reviewing pane. The user types the comment in the new window and can make changes to the comment as often as necessary. In addition, the user may select the "Print View" format in the View toolbar and the comment will appear as a balloon in the margin next to the text. If the balloon comment is longer than will fit in the margin, Microsoft Word automatically continues the comment in a new window in the reviewing pane.

For longer summary comments, the professor may use the "Insert Comment" feature at the beginning or end of the section, or the professor can simply insert the comment into the student's text by moving her cursor to the appropriate location and typing the comment. The track changes feature will highlight the new typing as a change to the student's text so the student will know that the new text is a comment from the professor.[120]

To make the use of master comments efficient, the professor can use the "AutoText" function. AutoText allows the professor to save and reuse comments that she may want to use on other student papers. To save a comment with AutoText, the user must highlight the relevant text, click "Insert," then "AutoText," then "New." A dialog window will appear asking the user to name the AutoText entry. The professor should select a name that easily identifies the comment. The next time the professor wishes to insert the comment, the professor simply types the name of the comment and the AutoText comment will appear. The professor then presses "Enter" and the AutoText comment is inserted. At that point, the professor can revise the AutoText comment, if necessary.[121]

To make editing changes, the user must select "Track Changes" in the toolbar before beginning the critique of a paper.[122] All changes made

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click at the end of the text which you wish to comment on and then click on the "New Comment" button located on the review tab in the Comments group. *Id.* From here, simply type your comment in either the new window or comment balloon that appears. *Id.*

[120]   *See infra* notes 122-23 and accompanying text.

[121]   *See* Microsoft Office Online, http://office.microsoft.com/en-us (click on the "Products" tab; then follow the hyperlink for "Word"; then search "Create and Distribute Boilerplate Text") (last visited Aug. 07, 2007). To revise an Auto Text comment in Word 2007, simply insert the comment into the document, make the desired changes, and then save the revised comment using the exact same file name. *Id.* When asked if you want to redefine the building block entry, click "Yes." *Id.*

[122]   *See* Microsoft Office Online, http://office.microsoft.com/en-us (click on the "Products" tab; then follow the hyperlink for Word; then search "Track Changes While

by the professor are then automatically tracked by the program so the student can see the editing changes that have been made.

The students may review the comments in several ways. By placing the cursor over the comment icon, the comment will pop up in a separate window. In addition, the student may select the "Print View" or "Markup" in "View" to have the comments appear as balloon comments in the margins or in the reviewing pane at the bottom of the page. Finally, the student can opt to print the paper with the comments.

2. Electronic Voice Comments Embedded in a Student Paper

Adding voice comments with the comment feature of Microsoft Word is simple. First the user must add the voice comment function to the toolbar.[123] Then, to add a voice comment, the user highlights the relevant text and clicks the "Voice Comment" button and an icon is displayed with recording controls.[124] The only thing the user needs to keep in mind is that the comment will only record for one minute each time the record button is clicked. The comment may be longer than one minute, but at the end of each minute, the "Record" button must be clicked again.

To ensure good recordings, a quality sound card and microphone should be used. Although a sound card of the quality necessary for digital music recordings is not required, something better than the basic

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You Edit") (last visited July 09, 2007). The "Track Changes" feature allows a student to view exactly how the student's paper has been edited by displaying any deletions, comments, formatting changes, or moved text, inside comment balloons. *Id.* In Word 2007, this feature is enabled by right clicking on the Status Bar and then clicking on "Track Changes." *Id.* Once this is complete, a Track Changes Indicator will appear on the status bar, which can be clicked to turn the feature on or off. *Id.*

[123]   *See* Microsoft Office Online, http://office.microsoft.com/en-us (click on the "Products" tab; then follow the hyperlink for Word; then search "Insert or Delete a Comment") (last visited July 12, 2007). You can add the Insert Voice function to the quick access toolbar by clicking on the "Microsoft Office" button, then clicking on "Word Options," and then clicking "Customize." *Id.* From here, select "All Commands" from the list under "Chose Commands From" and then select "Insert Voice" from the list of commands. *Id.* Following this just click "Add" and the "Insert Voice" command will appear on your quick access toolbar. *Id.*

[124]   *See* Microsoft Office Online, http://office.microsoft.com/en-us (click on the "Products" tab; then follow the hyperlink for Word; then search "Insert or Delete a Comment") (last visited July 12, 2007). Once the "Insert Voice" function has been added, you can record a voice comment by clicking on it, and then pressing the "Start" button located inside the dialog box that appears. *Id.* When you finish recording, press the "Stop" button located in the same dialog box and then close the dialog box. *Id.* If Word asks whether you want to update the sound object, click "Yes." *Id.*

sound card provided in most laptops is probably necessary to ensure that the recorded comments will be clearly heard by the listener.

The other challenges with the voice-imbedded comments occur because of the size of the files. Even with just a few voice comments, the documents require a lot of memory. Therefore, transferring the files for back up and student return is challenging. Transferring such large files may not be possible via e-mail because many e-mail systems limit the size of files that can be transferred. But even if the system does not limit transfers, very large files are often too cumbersome to successfully send by e-mail. Therefore, some other method of transfer must be used. Uploading such large files to websites may not be possible with home internet connections, even high-speed connections such as DSL or cable. Therefore, backing up and transferring the files may be best by some use of hardware, such as a USB drive or external hard disk. Uploading to websites is best from the law school's high-speed internet connection.

3. Removing Professor's Personal Information from Comments and Changes

Many professors grade and critique assignments over a long period of time, from several days to a few weeks. If the professor would prefer that the students not be able to determine the date that the professor read the students' papers, the professor should remove all identifying information from the comments.[125]

4. Digitally Recorded Comments with Electronic Margin and Editorial Comments

Using a stand-alone digital recording device is another way to provide voice comments. Digital recorders are similar to tape recorders, fairly inexpensive, and easy to use. The recorders record sound digitally in files that can be transferred and played on personal computers and other devices, including iPods and MP3 players. Although the professor cannot imbed the comments recorded with a digital recorder in the students' papers because the digital recorder's software does not interface with word processing applications, the professor can use the device to record a set of comments for each student assignment.

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[125]   *See supra* note 117 (detailing how time stamps and other identifying information can be removed from comments in Word 2007 in the same manner personal or hidden data can be removed from a document).

For each assignment, the professor records the comments and the voice recorders automatically number each comment, so the professor must physically insert the number of the comment on the student's paper. Typing the number on the student paper is easy to do using the insert comment feature from the word processing application.[126]

Once a professor has completed a student's paper, the professor must transfer the comments from the voice recorder to a personal computer. Each numbered comment is transferred as a separate file. At this point, the professor is able to add the name or student number to the comments. The best way to do this is to name a folder with the student's identifying information and transfer the files from the voice recorder to that folder. As a safeguard, the professor could record the name or student number as the first comment for each paper and place it on the top of the student paper.[127]

The professor can place the student's paper with the electronic margin comments and editing changes in the same folder as the voice comments. The folder for each student can easily be zipped for transfer.[128] Transferring zipped folders by e-mail or uploading the folders to websites using any high speed connection, home or office, is easily accomplished.

5. Clarifying Electronic Voice Comments in Advance of Student Meetings

When using any kind of electronic voice comments, the professor will face the same challenges during conferences that were discussed

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[126]   *See supra* note 119 and accompanying text (offering directions on how to insert numbers into a document using Microsoft Word).

[127]   Some digital voice recorders allow the recordings to be saved in different formats, including wav, MP3, and vox files. If the recorder does not save the recordings as MP3 files, the user can easily convert the files to MP3 files using a variety of conversion software once the files have been transferred to a personal computer.

[128]   Zipping a file compresses it, making it considerably smaller, which conserves storage space and makes transferring the document easier. Microsoft recommends several products to accomplish this including: WinZip, which can be purchased at http://www.winzip.com/index.htm; Stuffit, which can be purchased at http://www.stuffit.com/win/index.html; PowerArchiver, which can be purchased at http://www.powerarchiver.com/; PKZip, which can be purchased at http://www.pkware.com/; PicoZip, which can be purchased at http://www.picozip.com/; and, PentaZip, which can be purchased at http://www.pentazip.com/. Links to each of these sites are provided on the Microsoft Office Online website. *See* Microsoft Office Online http://office.microsoft.com/en-us (search "Zip or Unzip a File") (last visited July 10, 2007).

previously regarding taped comments.[129]   However, electronic voice comments do allow an easy method for professors to quickly listen to their comments in preparation for student meetings.   Sometimes a student may contact the professor because the student is unable to understand a comment due to a technical problem or because of the substance of the comments. The professor can have the student copy the voice comment and send it by e-mail with the student's specific questions.[130]   Having the student send the specific comment to the professor with focused questions allows the professor to either explain the comment or respond to the questions by e-mail or wait to discuss the comment and questions with the student during the meeting.

VI. CONCLUSION

Guiding students' learning by commenting on their writing is a central part of the mission of teaching the law effectively.   Law professors must focus on the substance of their comments, but must also recognize that the mechanics of how they critique their students' writing is important because it affects the substance of their feedback. While traditional hard-copy techniques may have benefits, some form of electronic feedback is probably necessary to effectively, efficiently, and practically provide the type of critique that is needed in most law courses. Professors should embrace technology and begin to consider the different electronic modes of critique that will allow them to use the most effective method to provide the highest quality feedback possible to their students.

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[129]   *See supra* notes 47-49 and accompanying text (discussing the challenges of using taped comments).

[130]   Students do not need to send their entire document to their professor, rather they can just send the individual voice comment(s) on which they would like to receive further clarification. *See* Microsoft Office Online, http://office.microsoft.com/en-us (click on the "Products" tab; then follow the hyperlink for "Word"; then search "Copy and Paste Multiple Items by Using the Office Clipboard") (last visited on July 16, 2007). In Word 2007, this is done by selecting the icon which corresponds to the voice comment desired to be copied and then clicking the "Copy" button, on the home tab, located in the clipboard group. *Id.* Then the student just opens the document they wish to send to the professor, clicks on the area where the student would like the items to be placed, and double clicks on the corresponding icons in the Clipboard task pane. *Id.* This document, complete with the pasted voice comments, can then be attached to an e-mail and sent to the professor. *Id.* When using voice recorder files the situation is even easier, as the voice comment files can simply be attached individually to an e-mail in the same manner in which you would attach any document to an e-mail. *Id.*