

# Golf swings, tennis serves, and technical writing — things we can upgrade

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*The objective of the proposed research was to test the hypothesis that male courtship feeding, and sexual cannibalism in particular, are maintained through a post-copulatory female mating preference of males capable of supplying females with the highest material ... This excerpt from a published research report: English? Yes. Good technical writing? Not even close!*

In my last column, I facetiously noted that most professionals seem to acquire technical writing skills either magically, osmotically, or through the handshake that accompanies a degree. Learning technical writing skills is not something to which we devote a reasonable amount of time. And it is certainly not something we typically update or upgrade. Ironically, as professionals we spend 20% or more of our time writing.

Perhaps we feel that we learn technical writing through a practice-makes-perfect approach. I suggest that the practice-makes-perfect approach, in truth, is more like the bad-golf-swing or weak-tennis-serve approach: Continually repeating something that is incorrect does not correct it, it just ingrains it! Somehow we have to break the routine. For both golf and tennis, we can easily recognize our shortcomings and seek professional help or advice to improve. For technical writing, we rarely recognize our shortcomings and even more rarely seek professional help or advice.

Maybe the answer is that in golf or tennis we keep score as we play. This keeps us posted on our progress toward the goal: Winning. However, in technical writing, there are no running scores; there is only a final score (e.g., getting a manuscript accepted for publication). No strokes or points are tallied during the writing, editing, or reviewing processes. Can you imagine if there were? "Woow, I lost two strokes for poor syntax." Or, "Sorry, but that weak abstract will cost you a penalty point, love-15." Absurd? Sure, but I go back to my original question. If we are willing to study golf or tennis to improve performance, why won't we study technical writing?

I think the common answer to that question is: "I am too busy. I know I should work on my skills, but I have other things ahead on my to-do list." I know that's what we say, but is that really true? I am a firm believer in the old adage: *If you want something done, ask a busy person.* Time certainly could be found. And there are resources to match that time: Books, articles, seminars, the Web, night classes, weekend classes, even an SEG short course — remember the one that was planned for the weekend before the November 1997 meeting but was canceled because only two people registered? No, I don't think it's time; it is really something else.

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*Editor's Note: The "Writer's Block" is a new bimonthly column on technical writing and editing issues by Ken Mahrer, a five-term Associate Editor for GEOPHYSICS. The inaugural column appeared in the March 1998 issue of TLE. The author can be reached at kmahrer@du.edu.*

In my opinion, the no-time-too-busys are a subterfuge. What I really think is most of us feel we write OK. Maybe not great, but OK. Right? I would be jingling loudly if I had a shekel for every time I've heard, "I'm not a great writer, but I am a good writer. I can do the job." Maybe. But if that is the case, there must be a lot of good writers. And with all these good writers, the review-and-editing process is probably unnecessary. Right? We could save lots of time and money and simply publish originally submitted manuscripts! Right? Wrong! All of us at GEOPHYSICS know this would not work. Nearly all the manuscripts submitted to GEOPHYSICS need editing.

At the risk of offending but following the example of the little boy who proclaimed, "The king has no clothes!" I believe there are a lot of well-intentioned but weak writers and relatively few really strong writers. And, like the king hearing the little boy, I'd like to think that this column, both this month and in general, is a wake-up call. In my opinion, most if not all weak writers have the ability to become much stronger writers. Taking a lesson from tennis or golf, swallowing some humble pie, admitting that one may not be a good writer, and then doing something about it can dramatically improve writing skills.

The first step, recognizing and admitting one's own weakness, is probably the most difficult. However, as the following example taken from a recent issue of a national oil journal shows, it's only the first step. A second step, doing something about it, must follow.

This is my final issue as Engineering Editor of [Journal X]. Nearly five years of editorial experience has been an extremely valuable tool for me. As a petroleum engineer with time served in the field, working for a major international oil and gas magazine has greatly enhanced my oral and written skills, which are critical assets to engineers today. Which is why I encourage every engineer (or any other technical professional) that reads this column to write and present and/or publish at least one paper in their career. It's a humbling experience at first (trust me, it helps to have an English or journalism major with good editing skills handy), but also a very rewarding one. It could help your career out in ways you cannot imagine.

As you can see in this example, the author has openly admitted his initial technical writing weakness. As you can also see, he seems to have fallen just a bit short in curing his problem with grammar.

My point here is not nailing this author. He recognized his shortcoming and tried to do something about it. My point is this. Who needs to study, review, or update technical writing skills? Answer: We all do, from the novice to the oft-published writer. We all can gain from periodically evaluating our skills. Technical writing is not osmotic or magic; it's not a learn-once-have-always tool; and it's certainly not a practice-and-you'll-get-perfect skill. Truthfully, it's a learn-once-maintain-and-upgrade-periodically

skill. If you don't believe me, consider your golf swing or tennis serve!

[Note: To aid in my campaign to get our readers to self-evaluate and upgrade technical writing skills, my next column will be a review of means and methods for upgrading technical writing skills. My campaign (i.e., harangue) is not purely altruistic. Well-written documents are much easier to read. Also, good technical writers make better technical reviewers, and we at GEOPHYSICS are always looking for good technical reviewers.]

At this point I'd like to change directions a bit and discuss a recent experience that goes to the etiology of weak writing skills.

A few days before I began writing this column, I had the not-very-joyous task of grading undergraduate research project reports. The project was the laboratory part of a general survey class on energy. The project asked students to log their personal energy consumption for two weeks. At the end of the two weeks, the students formed into groups of four or five and combined their energy logs to calculate average energy consumption. They were then asked to find ways to reduce realistically the average total energy consumption by 20% of its total dollar value and then to assess the implications of this reduction. Finally, they were told to compile their results and write a final report, one report per group. You can just imagine what I received!

Despite spending most of a two-hour class discussing the organization/preparation/writing/proofreading/etc. of a technical report, I was utterly amazed at what I received. I had specifically warned about the pitfalls of

eleventh-hour work; in some cases what I received must have been eleventh-hour-fifty-ninth-minute work.

From the macro- down to microscale, most of the reports were substandard. Poor grammar was the rule, not the exception. One group had a section titled "Percussions." (I think they meant *repercussions*, but it passed the spellchecker so it must be correct!) Most graphs were very colorful (the joy of color printers) but lacked captions, names of axes, or explanations of symbols. Data tables were also en vogue, but unfortunately they were typically  $7\frac{1}{2} \times 10$  inches of columns of numbers without explanations, units, column heads, etc.

Consider these special examples:

In total, there were about 20 groups of students. Four groups decided to reduce overall energy consumption 20% by having each member of their four-member group reduce energy by 5%. Given this approach, reducing energy consumption 20% was "a piece of cake," as one group wrote. I later asked the class en masse, "To reduce 20% you used 4 people each reducing 5%. Using that same logic, if you had had 100 members in your group and each reduced energy consumption by 1%, would that have caused a 100% reduction or no energy left?" Most just looked at me. Some bowed their heads in disbelief.

Another group wrote: "The average American has more percentage of body fat than any other country on the planet." What can you say to something like that?

The students had been told to begin each report with a one-page summary. I had told them this was common in reports and that they should put specific information into the summary. Here is one, not atypical, example. "The purpose of this experiment is to take a detailed two-week sample of an individual's energy intake. Our goal was to reduce energy consumption by 20%. Through formulas and conversions, a uniform standard provided a common ground to compare the results. In the experiment, we obtained each member's information and analyzed the areas yielding excessive waste. From this analysis, we formed opinions as to where the consumption reduction could be achieved. Each member chose a specific area to achieve a reduction in consumption. Through combined efforts, we successfully achieved a 20% reduction in the overall picture of waste and consumption." Does this sound like any abstracts that you have read? Sound and fury signifying nothing?

I could go on, but I think I have made my point on etiology. Here, also, is an irony. Yes, these reports are by students and, yes, students are here to learn. The exercise was designed for them to learn, but, unfortunately, they won't learn about writing. I marked up the reports, but for most of them, those marks were not recognized for their value — a learning tool. Few came to pick up their reports. Of those who did pick up their reports, they opened them, looked at the grade, glanced at the marks, and left my office. I can only imagine the names they bestowed upon me for the grade I gave them (not the grade they earned). In general, there was minimal recognition of the feedback loop regarding the writing. And that's the irony. They should be learning about writing, in addition to the project. But, they won't, because the course is not a writing course. Instead, they will simply keep repeating their golf swing or tennis serve and wonder why curmudgeons like me hassle them. It seems to parallel what happens with some of the manuscripts I edit for GEOPHYSICS. ■