

Developing Prolific Scholars: The “Fast Article Writing” Methodology

Elena A. Mikhailova & Linda B. Nilson
Clemson University

Faculty and graduate students are under enormous pressure to produce journal articles, yet little help is available on speeding up the process. This article offers an organizational strategy, called the “fast article writing methodology,” for expediting article writing where the published product follows a standardized format. We also present faculty and graduate student assessments of it, obtained anonymously at the end of five workshop offerings on the topic. The lead author developed this methodology and conducted the workshop. All the participants immediately appreciated the value of the methodology and intended to implement it; a few intended to teach it to their students.

Most college and university faculty have many motives and gain many rewards for publishing their scholarly work: reappointment, tenure, promotion, salary increases, better employment opportunities, career mobility, institutional prestige, professional recognition, and even a kind of immortality. In fact, for many faculty, research and writing constitute the major responsibilities of their position.

Predictably, quite a few books are on the market on how to write scholarly articles, their major focus being the proper organization and writing style and ways to identify the most appropriate journals (e.g., Moxley, 1992; Schoenfeld & Magnan, 1994; Moxley & Taylor, 1997; Silverman, 1999; Darley, Zanna, & Roediger, 2004). These books are aimed largely at junior faculty and graduate students, although mid-career faculty may also need support to re-engage in research and writing (Nottis, 2005).

What *is* in short supply is advice on how to be more productive—how to write and publish more journal articles—and almost all that is available is from Boice (1989, 1990, 1991, 1992, 2000) and Gray (2005). In his 2000 book, Boice summarizes his earlier research behind his recommendations. Some of them

pertain to states of mind that spur productivity, one of which is “mindfulness,” which Boice defines as “calm in the present moment” (Boice, 2000, p. 106), and others which advocate moderating emotions, negative thoughts, and ego-identification with one’s work. But work behaviors are just as essential: starting projects early with prewriting activities such as outlining and freewriting (unedited stream-of-conscious writing on a topic); working in brief, daily sessions and recording those sessions; balancing prewriting and prose writing; enlisting others as writing buddies, collaborators, and critics; and taking good physical care of oneself. Gray (2005) builds on Boice’s advice, particularly writing daily, recording work sessions, and making oneself accountable to another individual or group. Indeed, one of Boice’s (1989) research studies found that faculty who faithfully did these three things wrote or revised nine times as many pages in a year (157 versus 17) as those who just wrote in large blocks of time.

Gray (2005) goes beyond Boice, however, in recommending step-by-step writing strategies that ensure both efficiency and clarity: beginning the write-up of a project on one’s first day on the project; post-

ing one's thesis on the wall and writing to it; writing each paragraph around a key sentence; showing early drafts to non-experts and later drafts to experts, and responding to all their comments; editing from reading one's prose aloud; and submitting one's manuscript to the most appropriate journal(s).

Our contribution to this productivity literature, the "fast article writing" methodology, is an organizational and logistical system for optimizing scholarly productivity without sacrificing quality. We focus not on the writing *per se* but on how to write articles with as little mental effort as possible. This methodology streamlines and automates the article-production process, making formulaic what can be standardized. It is based on organizing ideas and supporting materials in three-ring binders, writing articles non-sequentially using a standardized procedure (article checklist and shell), and efficiently keeping track of submissions. When the process is rendered so transparent, it can be safely delegated to graduate and even undergraduate students.

But does this methodology have truly broad application? One way to assess its utility is to ask other scholars across many disciplines what they think of it. Are they interested in using it? Do they expect it to enhance their productivity? The lead author, who developed the fast article writing methodology, also designed and conducted a one-hour workshop on it. At the end of each workshop offering, participating faculty and graduate students completed anonymous, open-ended feedback forms on their assessment of the workshop and its contents. These survey results are presented here.

The Fast Article Writing Methodology

The fast article writing methodology is based on the organization and optimization of the scientific writing process. While organization is a basic concept in writing (e.g., article outlines), "optimization" is a less known and utilized idea. The verb "optimize" is commonly defined as "to make as perfect, effective, functional as possible" (Mish, 2003, p. 871). The fast article methodology can be best described then as a step-by-step process that facilitates and optimizes the article-writing and publication process, communication and collaboration with co-authors, and the mentoring of graduate students in thesis and article writing.

In this article, the methodology is oriented towards original research articles published in science journals. But its overall strategy can be adapted to other common types of articles, such as review and teaching case articles, and all disciplines. All that is required of scholars is to be familiar enough with the literature that they can identify the typical components and length of successful articles in their field.

Fast Organizing

Key to this methodology is the step-by-step organizing of the necessary materials.

1. Dedicate two bookcase shelves to article writing and label one "In Preparation" and the other "In Submission."
2. Dedicate one 1/2" (or thicker) three-ring binder to each article you have in mind.
3. Write the key idea or title of each article on the spine of its binder (e.g., use a pen on masking tape).
4. Insert the "article checklist" (see Table 1). This checklist is the table of contents for the article with one column specifying the length limits for each section and two more labeled "date" and "status." In most scientific fields, the "ideal" research article contains 10-12 double-spaced pages of text (title page, abstract, keywords, introduction, materials and methods, results and discussion, and conclusions), a list of about 20 references, a list of figures, and up to six outputs (e.g., graphs, figures, tables, and photos). The date and status columns simplify the communication and collaboration with co-authors.
5. Insert three dividers and label them 1) Article, 2) Data, and 3) References.
6. Conduct a literature review and insert copies of the most relevant articles in the References section of the binder.

Fast Writing

7. Select the article that makes the best model for your article and bookmark it with a sticky note, flag, or index tab labeled "Model" for easy reference.
8. Create an electronic folder for the article and download the "article shell" (see Table 2) to guide your writing.
9. Modify this shell to accommodate your discipline, the type of article, and journal selected for submission.

10. Write your article by filling in the shell, starting with the easiest parts (e.g., title page, keywords, acknowledgments, reference list).
11. Produce the outputs—tables, figures, photos, etc.—before writing the Results and Discussion, which is usually the hardest section to write. Then write the section simply describing the outputs.
12. Complete the article and submit it, electronically if possible, to the selected journal.

Fast Record-keeping

13. Print the submission confirmation/receipt and file it in the article folder.
14. If applicable, record the log-in information (user ID and password) for the journal's internet portal to facilitate checking on the article's status.
15. Move the folder from the "In Preparation" to the "In Submission" shelf.
16. Make a spreadsheet listing of the titles of all articles under submission, specifying the journal, the submission date, and the date to check on the article's status (usually three to five months after submission).

Workshop Description

The Office of Teaching Effectiveness and Innovation (OTEI) at Clemson University sponsored the one-hour workshop on the fast article writing methodology under the title, "How to Become a Successful Author of Scientific Articles." The University's pursuit of ranking among America's top 20 public national universities—it recently ranked 30th in *U.S. News and World Report* (The top 50 public national universities, 2006, p. 115)—provided the major impetus for developing the workshop, as reaching this goal requires the faculty to publish more prolifically. The workshop was publicized via electronic mail on the faculty electronic mailing list and graduate student electronic newsletter published semi-monthly. The announcement stated that the workshop was oriented to the natural and physical sciences but applied the social sciences, education, and management as well. It was conducted in a computer laboratory to allow participants to download the article checklist and the article shell for use as templates.

Table 1. Fast Organizing: Article Checklist for an Original Research Article, Formatted for Many Science Journals

No.	Title	Text Pages	Date	Status/Comments
1	Title Page	1		
2	Abstract	1		
3	Keywords	6 words		
4	Introduction	2-3		
5	Materials and Methods	3 (total)		
	a) Study Area	1		
	b) Sampling	1		
	c) Laboratory Analysis and Statistics	1		
6	Results and Discussion	2-3		
7	Conclusions	1		
8	Acknowledgments	2-3 sent.		
9	References	20 ref.		
10	List of Figures	1		
	Figure 1	1		
	Figure 2	1		
	Figure 3	1		
	Table 1	1		
	Table 2	1		
	Table 3	1		

Comments:

1. Text pages do not include figures and tables, which are attached separately at the end of the document.
2. Text should be double-spaced and lines numbered.

Table 2. Fast Writing: Electronic Article Shell for an Original Research Article, Formatted for Many Science Journals (Example: Soil Sciences; ASA, CSSA, & SSSA, 2005)

Title should represent article's content (max. 12 words)

J.R. Smith* and M.E. Jones

Department of Soil Sciences, Anywhere University, ST, USA

*Corresponding author. Current address: Department of Soil Sciences, Anywhere University, XXX College Hall, City, ST XXXXX, USA. Tel: XXX-XXX-XXXX, Fax: XXX-XXX-XXXX.

Email address: jrsmith@anywhere.edu (J.R. Smith).

ABSTRACT

(1 double-spaced page, 250 words)

Rationale: 1 sentence. "Limited scientific information is available on..."

Objectives or hypothesis: 1-2 sentences. "The study was conducted to determine ..."

Methods: 2-3 sentences. Briefly describe the experiment.

Results: 3-5 sentences. Report your findings.

Conclusions: 1-2 sentences. Summarize the significance of your findings and future research needs.

Keywords: List up to six words or word combinations in alphabetical order. (Do not repeat words in the title.)

INTRODUCTION

(2-3 double-spaced pages)

Brief statement of the problem: Briefly state/describe the problem or hypothesis that justifies doing the work.

Literature review: Summarize the findings of others that you will develop further or challenge.

Objectives: Explain the general approach and objectives.

MATERIALS AND METHODS

(3 double-spaced pages)

Study area: 1 page. Describe the study area (location, climate, topography, etc.).

Sampling: 1 page. Describe the sampling procedures.

Laboratory analysis: 1 page. Describe the laboratory and statistical analysis.

RESULTS AND DISCUSSION

(3 double-spaced pages)

Before writing this section, prepare your outputs (figures, tables, etc.) according to the journal's format, limiting them to six. Each table or figure should be on a separate page and attached at the end of the manuscript. After finishing your outputs, describe your most important findings in the text, then discuss them in relationship to the literature reviewed in the Introduction. What did you find new, different, and/or exciting?

CONCLUSIONS

(1 double-spaced page)

Summarize your findings; may list them in order: 1)...., 2)...., etc.

ACKNOWLEDGMENTS

(1 double-spaced paragraph)

Acknowledge funding sources and those who helped with sampling and data analyses.

REFERENCES

(limit to 20 for original research, more for review articles)

Format the references according to the journal's style requirements. EndNote® software is one tool that simplifies the formatting task.

The workshop was offered five times during the last six weeks of fall semester 2005 and attracted the participant limit of 12 (plus a waiting list) every time. Over all five offerings, 12 participants were graduate students, all but one in the sciences and engineering fields, and 46 were faculty members representing all tenure-track ranks and 30 disciplines and programs, most in the sciences and engineering fields. Due to two no-shows, the total number of participants was just shy of 60 (5 x 12). All participants received a 1/2" binder with the printed version of the MS PowerPoint® presentation, the article checklist, the article shell, and selected pages from the most recent style manual of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA) (2005), along with a blank participant feedback form (standard at all OTEI workshops).

Participant Assessments of the Workshop

From the five offerings, a total of 51 participant feedback forms were turned in, all of which contained answers to at least three of the five questions on the form. In response to the first question, "What are the most important and useful things you learned during this workshop?" all but one participant described some knowledge or procedure(s) that they had learned, and the one who left the space blank positively evaluated the workshop on other questions. Table 3 displays some representative responses.

Question #2, "What did you think of the facilitator's workshop presentation and materials?" yielded 48 unqualified positive responses out of a total of 50. Participants wrote descriptors such as "engaging," "superb," "practical," "enthusiastic," "great,"

Table 3. Representative Responses to Question #1, "What are the most important and useful things you learned during this workshop?" from the Participant Feedback Forms

<i>Offering Date</i>	<i>Response (Total N = 50)</i>
11/03/05	Efficiency. I have already learned these concepts in commercial writing but not in academic.
11/03/05	The format and organization with the notebook will be very helpful for my undergraduate research and senior seminar.
11/03/05	How to systematize article writing for speed and efficiency.
11/10/05	The fast method of writing an article – I love the idea of breaking down big writing tasks.
11/10/05	Frankly, most of this is obvious to me now but I wish I had taken this workshop earlier in my career!
11/10/05	Organize articles into parts, keep a notebook for each article, and don't write sequentially.
11/22/05	Organization of a process that seems so abstract!
11/22/05	How to automate article writing.
11/22/05	The practical information is <u>very</u> useful. I can easily see myself using each strategy and applying [it] with graduate and undergraduate students. I appreciate the templates and the chance to see them used (sample notebooks).
12/01/05	Manuscripts are like hamburgers. I never thought of that before, but it makes sense.
12/01/05	- Concept of "materializing" ideas. - Ideas for organization and "automation." - Model article.
12/09/05	This helps take away much of the anxiety you have when starting a project. Organization ideas to make this process easier are awesome.
12/09/05	The folder process. I liked the example shell with descriptions for what each article section should be about.
12/09/05	What I am supposed to put in certain [article sections], such as abstract, introduction, etc. Very helpful!

“easy to follow,” “easy to apply,” “wonderful,” “insightful,” “well organized,” “effective,” “excellent,” “concise,” “succinct,” and “useful.” Of the two mixed comments, one praised the presentation and materials overall, but considered the three exemplary article binders that the facilitator passed around “distracting” and “too personal.” The other found the presentation and materials “helpful,” but raised concern that inexperienced scholars might not know how to adapt the lessons to their own discipline.

Question #3 asked, “How valuable did you find the activities and/or discussions in which you participated?” The major activity was a question-and-answer period, and 44 of the 45 responses given were positive—e.g., “relevant,” “helpful,” “excellent,” “great,” “very much,” and “very valuable.” One participant commented that no other activities beyond Q&A were needed or desired. The one “non-positive” response was a lukewarm “somewhat” with no explanation.

Question #4 requested not an opinion but a statement of intention: “If you already know, how will you use what you learned today in your scholarly writing?” Impressively, all 48 responses stated an intention to implement specific strategies from the workshop: the article template, the article checklist, the publication bookshelves, the workflow organization, the filing system, the use of binders, non-sequential writing, the entire methodology, and/or the whole approach in advising students and colleagues on how to generate and revise articles.

Finally, question #5 asked, “Any suggestions for improving this workshop?” Sixteen of the 51 forms contained no response to this question, which can be safely interpreted as an implicit “no.” Another 21 forms explicitly recommended no changes to the workshop. Five additional forms didn’t recommend changes but requested more similar workshops (a follow-up to critique participants’ manuscripts, a writers’ workshop, a motivation-to-write workshop, and a sister workshop on writing grant proposals). Eight forms suggested minor improvements—thicker binders, more opportunity for application, more time, examples from multiple disciplines—and one remarked that the workshop was “very useful” for scholars in early career stages, but for him or herself was only “inspirational” with “helpful hints.”

One other set of data was unsolicited email communication from two participants some time after the workshop they attended. A week after the offering

he attended, one engineering faculty member wrote this message to the second author: “[The] method is bearing fruit. Based on this note from one of my graduate students, we may be able to submit his paper by December after all.” This was the relevant part of the graduate student’s note: “Based on your requirements, I organized my literature and research materials. It looks much better than before. The article shell you provided me is so good that [it has given me] a better understanding of what I have [done] and what I still need to do.” This professor also taught the fast article writing methodology to an advanced class and reported: “Apparently [the students] have all been able to implement [the] fast article method, as two weeks ago, there was barely anything to show for their efforts.... The overall look of the projects...is good.”

The second author also received this email from a faculty member who attended the workshop about one of her departmental colleagues who also attended the workshop: “[Name] said [the workshop] changed her life. She went out and bought a bunch of notebooks and is very excited about what she learned in the workshop!”

Conclusions

The participant feedback data leave little doubt that the workshop was a major success, and it will be conducted many more times. All the faculty and graduate students who attended immediately understood the tremendous value of the fast article writing methodology for organizing and optimizing article production, scientific writing, and collaboration. In addition, they expressed in writing their intention to implement it in whole or in part. A few faculty wrote about their plans to teach it to their students, and one reported back that his students quickly learned it, applied it, and produced better work more quickly because of it.

Even if the participants didn’t point them out, the fast article writing methodology does have its limitations. It facilitates article writing only when the published product follows a standardized format. It could not optimize or even inform the production of a creative, innovative, or original form of scholarly expression, and it does not encourage any deviation from well-worn formulas. A path-breaking theoretical article, for example, might best follow only the most general manuscript-writing guidelines.

However, most scientific scholars, especially those in the earlier stages of their careers, have no need to abandon publishing formulas, and most journals are friendlier towards standardized articles. Therefore, for typical scientific research, the fast article writing methodology is a very useful tool for optimizing scholarly productivity without sacrificing quality. It facilitates the writing and publication process, communication and collaboration with co-authors, and the mentoring of graduate students in thesis and article writing. It should also be a useful teaching tool in the undergraduate research experiences that many colleges and universities are integrating into their curricula. Indeed, any program that teaches how to conduct research should also teach how to disseminate it.

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Elena A. Mikhailova is assistant professor of Soil Science in the Department of Forestry and Natural Resources at Clemson University. A member of the Honor Society of Agriculture (Gamma Sigma Delta) and the Scientific Research Society (Sigma Xi), she is also an NSF Fellow researching soil inorganic carbon sequestration.

Linda B. Nilson is founding director of the Office of Teaching Effectiveness and Innovation at Clemson University and author of *Teaching at Its Best* (2nd ed., Anker Publishing, 2003). She teaches a graduate course on college teaching and leads faculty workshops at universities and conferences both nationally and internationally.