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A Self-Assessment Strategy for Writing and Publishing a Quantitative Research Article

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Abstract
Publishing scholarly papers can be difficult and authors may not get their work published due to technical flaws with their writing (e.g., literature review, methodology, results, or discussion). This article provides a self-assessment strategy for writing a quantitative research article. It outlines ten technical aspects of a quantitative research manuscript and provides a checklist for writing and reviewing a journal article. The final section shares recommendations for supporting the writing process. This article is meant to be used by authors, reviewers, and graduate students for creating scholarly writing that gets published in an academic journal.

Keywords Checklist · Quantitative research design · Scholarly writing · Self-assessment · Writing process

Scholarly writing can be intimidating. Finding confidence to contribute a voice to scholarly writing can be a barrier for some writers (Robbins, 2016). Scholarly writing is communication within an academic community. This article is meant to be used by authors, reviewers, and graduate students for creating scholarly writing that gets published in an academic journal.

One of the hallmarks of scholarly writing is the nature of the review process where experts within the community participate in anonymous peer review, also referred to as blind review, because the author and reviewers do not know one another's identity. Writers of scholarly manuscripts may not get published for a variety of reasons. For example, there could be technical flaws with writing (e.g., methodology, review of literature, results, etc.). The technical aspects of scholarly writing may include how the writer manages and addresses all sections of a manuscript. In addition to technical weaknesses, there could be other limitations that prevent successful publication because of effective communication.

Writing resources could be helpful to overcome these two barriers. There are different types of articles including: (a) conceptual or theoretical, (b) empirical or research, and (c) practical. This article fits in the last category of a practical journal article. This practical paper shares information about technical components of a scholarly manuscript, and then offers recommendations for supporting the scholarly writing process.

Technical Aspects of a Scholarly Manuscript

The initial phase of organizing the sections could be compared to the layout of a grocery store. The design of the store has core elements that are determined by designers, like where to place the dairy or frozen foods sections. For example, registers could be in front of the store near the doors, with the milk at the back of the store, bakery to the right of the entrance, frozen foods in the middle of the store, and produce to the left of the entrance near the floral department.

Just like a grocery store, research papers contain consistent design elements that communicate information. There are multiple sections to consider when writing a scholarly manuscript. The features of the manuscript have standard flow and predictable parts, comparable to a grocery store that has flow through sections and aisles that allow the consumer to navigate parts of the store. The standard manuscript contains the following: Introduction, Method, Results, and Discussion sections (or IMRaD) (Čargo & Matić, 2024; Jalongo, 2023; Klein & Reiser, 2014; Özçakar et al., 2022). Creativity can happen in each part of the manuscript. Within

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the IMRaD format, writers could consider several technical aspects of scholarly writing.

Knowing where to go in a grocery store can help consumers avoid confusion. Technical features of a manuscript can help the writer and the reader know what to expect, and help locate what is needed for multiple purposes. All these parts offer the reader predictability in their reading experience. A scholarly manuscript with dependable sections offers consistency across scholarly outlets for writing just like a grocery store that is laid out with a predictable flow. There are approximately ten technical parts that contribute to a scholarly manuscript including: (a) title, (b) abstract, (c) keywords, (d) introduction, (e) literature review, (f) method, (g) results, (h) discussion, (i) references, and (j) acknowledgement sections. Next, these technical parts of a scholarly manuscript are explored with questions for each section.

Title

Sometimes titles are vague. Sometimes titles are misleading. Sometimes titles do not align with the topic(s) and/or text.

"Don't judge a book by its cover," is a saying that warns of jumping to conclusions based on what is on the outside of a book (e.g., title). The saying about judging the outside might make it seem like the exterior does not matter. The external features do matter and so does the title.

The title is possibly the first impression of the manuscript. Scholarly writing can be compared to a grocery store where the manuscript ***title*** is like the store façade or the front door. A grocery store has a façade that creates a first impression of the spaces. The front door can add curb appeal and invite the shopper into the building. Similarly, the title is like the front door that creates an invitation to the reader. A well-crafted title should engage the reader.

It is important that scholarly writing captures the content of the manuscript clearly and concisely with the title. Creating a title that conveys meaning makes it easier for the reader to find the manuscript based on the quality and quantity of the words chosen. Writers of scholarly manuscripts can say what they need to say by designing a title that captures the reader's attention.

The reader may choose to continue or stop reading the paper based on the title alone. Consider the length of the title. Some researchers have found that readers favor shorter titles for scholarly manuscripts compared to longer titles (Ferreira Garcia et al., 2019; Habibzadeh & Yadollahie, 2010; Jamali & Nikzad, 2011; Paiva et al., 2012). The title should be brief with enough information about content and/or theme and be "attractive to the rapid scan" (Ferreira Garcia et al., 2019, p. 3).

Use the most important words in the title (Cook & Bordage, 2016). The title should be unique, as well as describe what is in the manuscript (Tullu, 2019). A title should also have consistency with the rest of the article (Bettis, 2012). Check to make sure the title has not already been used by another author. Begin writing the manuscript with the title in mind, and then finalize the title when the writing process has come to an end (Cook & Bordage, 2016). A self-assessment strategy involves asking questions when writing the research paper for a journal. When writing a title for a scholarly manuscript, writers could ask questions when doing a self-assessment.

Questions about the Title:

- Does the title summarize the main idea of the paper?
- Does the title have a length of 15 words or fewer?
- Does the title include only words that contribute meaning?
- Does the title feature the findings, implications, and/or significance?

It is important that the title is carefully considered so that readers can find the paper in a database. Readers might use other search processes where the title is useful for them to determine whether they want to pursue reading the article. Some other ways readers find journal articles to read are by the references section. Reading the reference section and skimming titles can offer a way for readers to find journal articles. Titles from journal articles might jump out during presentations at conferences/meetings as citations and works cited are another way readers can find journal articles. There are many ways readers rely on titles to find journal articles.

A great deal of information can be gained when the title is declarative rather than indistinct which allows the reader to get a sense of the type of manuscript they are about to read (Galanis, 2013). Titles are worthy of consideration for ease and how they can target a topic of interest for the reader. Can we judge a book by its cover? Yes, we can learn a lot about a book by the cover and title. So too with journal articles. The title gives the reader a glimpse of what is inside.

Abstract

The abstract, after the title, is the most universally read section of a scholarly manuscript (Alspach, 2017; Ferreira Garcia et al., 2019; Plakhotnik, 2017). The abstract, along with the title, may be the only things a reader consumes from the manuscript based on how it is presented and written. Manuscripts that are submitted to journals can get rejected because their abstract is poorly written (Jalalian, 2012).

Check the journal guidelines to determine how many words are allowed for the abstract (Bettis, 2012). A well-constructed abstract should connect with the reader. The abstract, along with the title, is an initial impression of the manuscript. Plakhotnik (2017) compares the function of an abstract to supermarket product labels and how consumers read labels to help make decisions. The product labels are short and to the point, as are abstracts.

The purpose of an abstract is to describe, summarize, index, and be able to sort the manuscript topic into a body of literature (Alspach, 2017; Gambescia, 2013). Words from an abstract are included in databases. The abstract words hold weight in how the journal article gets used by readers. In their review, Hu and colleagues (2021) found that highly cited scholarly manuscripts had abstracts with more complex/professional words.

Abstract words must be chosen carefully to concisely convey what is in the paper. The value and originality of the scholarly manuscript should come forth in the abstract (Ferreira Garcia et al., 2019). Readers are possibly looking for topic(s) using the abstract to determine if the article could fit their needs. An abstract is like a map in the grocery store that can be used to help people discover what they are looking for and/or orient themselves.

The abstract essentially summarizes the paper. Bettis (2012) asks, "does the abstract condense the article?" (p. 1). Authors should be aware of journal word count when writing the abstract, as well as the journal's requirements for formatting. Some journals require the abstract is written as a paragraph (unstructured), and others have specific content that flow with bulleted data points for the paper (structured) (Hook et al., 2024; Hu et al., 2021; Plakhotnik, 2017). When writing an abstract for a scholarly article, writers could ask questions when doing a self-assessment.

Questions about the Abstract:

- Is the abstract less than 350 words?
- Is the abstract written in the past tense?
- Does the abstract include: the problem, purpose, research method, participants, study results, conclusions, and recommendations?

Reading a journal article is an investment in someone's time, energy, and resources. Many readers do not want to waste their time reading something that offers little or no value to them. Share why the paper has merit when creating the abstract. Highlight the practicality of the manuscript content if relevant to the topic and share what the reader can do with this information (Cook & Bordage, 2016). Let the reader know what they could take away from reading the paper.

Consider waiting until one of the last stages of the writing process to write the abstract and possibly waiting until the end (Cook & Bordage, 2016). After the title, an abstract might be another part of the scholarly manuscript that gives an initial impression for the reader. Writers of scholarly manuscripts can design a title and abstract that captures interest for the reader. After the abstract comes keywords.

Keywords

Grocery stores generally have a way to find things easily with how the aisles are categorized. There might be signage above the aisles that have words indicating what to find in that aisle. Some stores are implementing artificial intelligence for people to easily access and locate items by using voice commands and other strategies to help shoppers find what they are looking for in the store. In a scholarly manuscript, we have keywords to help people search and locate topics and published research papers.

In addition to the title and abstract, the keywords are another way for readers to find a scholarly manuscript. Use keywords that could help readers locate the manuscript. Select words that are going to help readers find the paper.

Another consideration when deciding on keywords to use would be standardized wording used by a field of study or journal. Some journals have a standardized list of keywords to choose from when publishing a scholarly manuscript. When selecting keywords, writers could ask questions when doing a self-assessment.

Questions about the Keywords:

- Do the keywords help readers find the manuscript?
- Are keywords in the text of the manuscript?
- Are there enough keywords provided?

Terms chosen for the keywords need to help the reader find the manuscript from search engines and scientific databases (Tullu, 2019). The purpose of keywords is to help readers find subjects. Indexing is a major purpose of the keywords chosen for a scholarly manuscript (Ferreira Garcia et al., 2019).

Sometimes there are limits on how many keywords a journal allows the writer to use. For example, if the journal uses American Psychological Association (APA) writing style, then three to five keywords could be recommended. Refer to the conventions of the writing style (e.g., APA, Chicago, MLA, etc.) used by the journal where the author is submitting the manuscript. Keywords generally appear after the abstract and before the introduction section.

Introduction and Literature Review

Technical aspects discussed so far have been the title, abstract, and keywords. These are ways readers can locate the manuscript. How writers create the Introduction sets the stage for the reader to experience a concentrated understanding of the topic(s) communicated in the manuscript. The introduction shares the general background on the topic with a description of the weight of the problem under investigation (Ahlstrom & Wang, 2020; Cals & Kotz, 2013; Simsek & Li, 2022). A problem statement gives context for the study. Thistlethwaite and Anderson (2021) suggest the introduction section should move from general to specific.

Components of an introduction (not in any particular order) may include, but are not limited to: background, problem statement, purpose of the study, research questions, nature of the study, significance of the study, and explanation of key terms. When writing the introduction section, writers could ask questions when doing a self-assessment.

Questions about the Introduction:

- Is there an overview that provides a context for this study?
- Is there a specific problem identified?
- Is the purpose statement closely aligned with the problem under investigation?
- Are the variables clearly articulated and aligned with chosen method?
- Is there a discussion of the proposed research method (quantitative, qualitative, or mixed)?
- Does the introduction show why the study is important and suggests possible contribution(s) to the field of study?
- Are key terms identified?

These questions can guide the author in assessing the degree to which these components are present, and question what needs to be communicated to the reader. Cals and Kotz (2013) suggest the introduction section is no more than 10–15% of the total word count. Typically, research papers end the introduction section with research question(s). The introduction section (as well as the discussion section) relies heavily on a thorough review of the literature on the topic(s) being explored.

When people write a research paper, they become aware and share what and how other studies impact their study (e.g., impactful and/or similar writing on topic, method, or other characteristics). If you are at an institution of higher education, it would be good to seek assistance from a librarian. Components of a literature review (not in any particular order) may include, but is not limited to: documentation, theme(s), and theoretical/conceptual framework. When writing the literature review, writers could ask questions when doing a self-assessment.

Questions about the Literature Review:

- Is the content from peer-reviewed scholarly sources?
- Are there sources cited that are relevant and published in the last 5 years?
- Are there citations from classic manuscript(s) in a field that are gold standards that have stood the test of time?
- Is the literature search strategy explained, if relevant?
- Are library and search engine sources discussed?
- Is there enough coverage on the topic(s) under investigation?
- Is the theoretical or conceptual framework(s) described for this study?

Once authors have conducted an extensive literature review, it will be used in the introduction and discussion, as well as other parts of the IMRaD format. The literature review should reveal what is currently known about a topic from people who have written and published works. Review of the literature must transfer where the field stands on the topic(s) by sharing what others have already found, who and what they are contributing to current knowledge, and where there are or could be gaps in understanding on the topic(s).

Method

Many grocery stores have an information section. This is a place where consumers can get flyers about sales happening in the store, coupons with special offers and promotions, ask questions, return items, and more. The grocery story help desk is like the section of a scholarly manuscript that deals with methodology.

Components of a method section (not in any particular order) may include, but are not limited to research method and design(s), population, sample, materials/instruments, operational definition of variables, data collection/processing/analysis, assumptions, limitations, delimitations, and ethical assurances. When writing the methodology section of a research paper, writers could ask questions when doing a self-assessment.

Questions about the Method:

- Are the methods clearly articulated and feasible?
- Is the population described?
- Is the sample size described?
- Are materials and/or instruments described?
- Are operational variables defined?
- Are data collection and analysis explained?
- Are assumptions described?
- Are ethical assurances described?

The method section of a research paper should provide enough information to the reader that would make replication of the study possible (Thistlethwaite & Anderson, 2021). Descriptions of experimental procedures need to be clear and cover all essential information. An effective method section allows the reader to judge the research (Coverdale et al., 2006).

Results

The results section of a scholarly manuscript is like the check-out lane at a grocery store. When a consumer takes their items to the cash register to pay for their groceries, they are learning the results of the purchases they want to make. A cashier or self-service checkout kiosk is where the consumer can find out how much the items cost, what taxes they might have on the purchase(s), and ho→w much money they saved with special store promotions and/or coupons.

This section of the research paper is where the research part of the story starts to create meaning for the reader. The reader may encounter both text and visual findings, however results do not need to be repeated twice (i.e., in both text and visual with tables/figures) (Thistlethwaite & Anderson, 2021). When writing the results section, writers could ask questions when doing a self-assessment.

Questions about the Results:

- Is a brief overview of the results section provided?
- Does the results section begin with a brief overview of the purpose of the research study?
- Are data analyses reported without discussion (interpretation or speculation as it should appear in the discussion section)?
- Does the results section give appropriate descriptive information, as well as implications for the profession?
- Are results presented in a logical fashion, answering the research question(s)/hypotheses as stated and appropriate to the type of data collected?
- Are assumptions of statistical tests identified, and any violation of assumptions?
- Are decisions based on the results of the statistical analysis (for example: are the results statistically significant?)?
- Compliance with journal writing style (e.g., APA, Chicago, etc.) format of tables, table titles, figures and figure captions?
- Are reported findings discussed and briefly what they mean?
- Are results interpreted with context or the conceptual framework(s)?
- Is a description included about whether the results obtained were expected given the literature and provide potential explanations for unexpected or conflicting results?
- Is a brief interpretation provided within the study context and profession?
- Are findings in terms of the originality of the contribution identified and discussed?
- Is it clear how the profession and/or field of study are affected by the inquiry?
- Are conclusions drawn that avoid going beyond what can be interpreted directly from the study results?

Findings are focused on the facts with little or no interpretation. Results are what happened with the research. The components of the results section may include findings and a brief evaluation of the findings, but not in depth as that is saved for the discussion section.

Discussion

The discussion section happens at the end of the research paper. The writer provides an overview at the beginning of the discussion and reminds the reader of the problem and purpose of the study by referring to the introduction section. There is a recap for the reader of the main points and findings from the results (Thistlethwaite & Anderson, 2021). Here is the place with discussion where writers and readers can increase understanding by discussing the meaning of the research. This is where the author addresses the "*so what*" question. So, what happened and what does it mean? So, why is this important? So, what next?

Writers of scholarly manuscripts can use the discussion section to shine a light on the topic using findings and content from the literature review to make meaning for the reader. Components of a discussion section may include, but not limited to implications, recommendations, and conclusions (Connelly, 2009; Hess, 2004; Skelton & Edwards, 2000). When writing the discussion, writers could ask questions when doing a self-assessment.

Questions about the Discussion:

- Does the discussion section begin with a brief review of the problem statement, purpose, method, limitations, ethical dimensions, and conclude the introduction with a brief overview of the section?
- Is each research question discussed and (when appropriate) hypothesis individually, and draw logical conclusions?
- Are potential limitations that may have affected the interpretation of the results discussed?
- Are results discussed in terms of how they respond to the study problem, fit with the purpose, demonstrate significance, and contribute to the existing literature described in the Introduction section?
- Are implications described, considering the literature described in the Introduction section, and applied in the context of the profession/field of study?
- Is the practical utility explained in terms of potential ways of applying conceptual frameworks, models and

processes directly in real contexts, specifically related to the study context and to the broader social context?

- Are all recommendations supported with the research findings?
- Are recommendations for future research made?

Authors of research papers will weave in and align their research findings with existing literature on the topic(s). What is already learned from the literature review will be shared in the discussion section, as well as gaps and other observations that illuminate the issue(s) in a research paper. A point of the discussion section is to share with the reader where current understanding exists in reference to the past, present, and possibly look to the future of a topic (Kearney, 2017). The discussion section advances understanding and hopefully can move the field forward with contributing to what already exists in the literature on the topic.

References

Sources are cited in scholarly articles (Bettis, 2012). The references section provides a solid basis for where ideas came from that are cited in the article. "The reference list at the end of a paper provides the information necessary to identify and retrieve each work cited in the text," (American Psychological Association, 2020, p. 281).

Writing style guides are useful for formatting works cited in the journal article. The latest editions of the mechanics of style should be used, because changes happen with style guidelines. When creating the references section, writers could ask questions when doing a self-assessment.

Questions about the References:

- Have significant works been properly cited?
- Does the journal article present appropriate citations for ideas presented in the text?
- Are there proper attributions to the author(s) who contributed the ideas that are cited in the article?
- Are sources cited from peer-reviewed journals?
- Some journals require statements for artificial intelligence used in the writing. Have those been followed in the references section?
- Is everything in the references section that was cited within the text?
- Are there citations in the references section that were not cited in the text that need to be removed?
- Do the citations in the references section follow writing style guidelines and conventions?

When writing a scholarly journal article, attribute the ideas to the author(s) who made the contributions. Publication credit should be given where it is warranted. For instance, a writing style guide used in social science shares information about protecting intellectual property rights (American Psychological Association, 2020). Properly citing sources is an ethical responsibility when writing for an academic audience and being a member of a scholarly writing community.

Acknowledgements

Scholarly articles often have a section for the author to acknowledge those who have contributed to the development of the journal article, but who are not authors (Bettis, 2012). A contributor is different from an author. Journals will often request a description of what role each author played in the development of the journal article.

Authorship is often described by writing style guidelines. Authorship is defined as, "persons who make a substantial contribution to and who accept responsibility for published work. Authorship encompasses, therefore, not only persons who do the writing but also those who have made substantial scientific contributions to a study. Substantial professional contributions may include formulating the problem or hypothesis, structuring the experimental study design, organization and conducting the analysis, or interpreting the results and findings" (American Psychological Association, 2020, p. 24).

A contributor could be a person, organization, or funding agency. Contributors who are acknowledged could have offered value to the development of research and/or journal article. For example, research participants (e.g., children and their families, teachers, etc.) could be acknowledged in this section for the contribution they made to better understanding the topic under investigation. Another contributor could be the funding agency that invested financial resources into the research project.

The acknowledgement section is where the author recognizes contributors who contributed to the field of study. This would not be a section or place to offer gratitude to people who supported the author in other ways like bringing them coffee, or parents who have provided the author with love for many years. The acknowledgment section needs to be relevant to the context of the article with recognition to the contributions of those who have advanced understanding of the subject being explored by the author(s). When writing the acknowledgement section, writers could ask questions when doing a self-assessment.

Questions about the Acknowledgement:

- Are there any contributors to the journal article or research study who deserve to be acknowledged?
- Has the acknowledgement been written in a way that offers gratitude for the contributions made by others who are not authors or co-authors?

- Is the acknowledgement section well written?

Journal articles may include an acknowledgment section to recognize the contributions made by others. The section can be written from the first-person point of view with a personal style and voice. Contributors are highlighted for the impact they make on the field in the acknowledgement section.

Writers must consider the title, abstract, keywords, introduction, literature review, method, results, discussion, references, and acknowledgement sections when writing a research paper (Saracho, 2017; Thistlethwaite & Anderson, 2021). Appendix A is a self-assessment that uses a writing checklist with sections to consider for writing a quantitative research manuscript, questions to consider when writing, and sections for comments on the manuscript. This can be used by writers as a checklist when creating a scholarly manuscript (Holosko, 2006; Lockwood & Oh, 2017; McEvoy et al. 2022).

Appendix A can also be used by people who are giving feedback to writers of scholarly manuscripts. The checklist in the appendix can be customized for each writer. The person giving feedback could use this checklist for: thesis, dissertation, and/or research paper with quantitative research design intended for a journal article or chapter in a book. When using the checklist, modify as needed for different purposes. Next is an exploration of the writing process with recommendations for supporting scholarly writing.

Recommendations

There are many ways that authors can refine their academic writing skill set when reporting on their empirical research. A self-assessment strategy was offered earlier with a technical breakdown of ten parts of IMRaD quantitative research paper. Scholarly writing follows form when technical aspects of the manuscript are addressed. The writing conventions used to write a research paper adhere to standardized expectations, however creative expression can be infused into all sections of the manuscript. The next part of this practical journal article will focus on the writing process. A description of five recommendations for the process of writing is presented next to include: (1) scholarly writing development, (2) assessment of writing, (3) self-care, (4) revisions, and (5) thinking aid.

#1. Development and Continual Improvement

The first recommendation has to do with scholarly writing. Learning about scholarly writing starts with first understanding the technical aspects of the IMRaD manuscript format. Finding and getting in tune with voice can empower the writer (Robbins, 2016). Having a point of view and then conveying ideas can happen during the writing process.

Writers have things to say and need readers to be able to understand what they are trying to communicate with them. Impactful writing is a hopeful outcome that many writers strive for with their scholarly writing. How frequently a scholarly manuscript is cited is an indication of the impact the writing makes on others (Hu et al., 2021; Pool et al., 2008).

In the quest to becoming a better writer, authors can explore how IMRaD manuscripts convey content. To become a better writer of scholarly manuscripts, it could be helpful to read many published manuscripts with the IMRaD format to observe how other writers write. Seek to find model text(s) where a well written example can serve as a template. Explore scholarly manuscript models that have undergone peer review process and reflect on the writing.

Journal reviewers and editors can also help authors improve writing. Experts in a field of study are part of the peer review process when they conduct blind or anonymous review (i.e., name(s) are omitted and they do not know who the writer(s) is), and then render a decision related to whether to publish the paper. The decision may be made by different people. For example, the peer reviewers and editorial team which could include the Editor-in-Chief, Associate Editor(s), Guest Editor(s) for special issue, or other editorial team member(s) all work together to review scholarly writing.

Another way to learn about the writing process is to pursue opportunities to learn from others. Peer reviewers and expert reviewers like university faculty can provide feedback on writing (Caffarella & Barnett, 2000). In the case of scholarly manuscripts that are a thesis or dissertation, the writing support team could be a committee which includes a Chair and/or members of the committee with expertise that are prepared to give feedback and make suggestions about next steps for the writing process. Once the thesis or dissertation are complete, begin the process of transforming the larger manuscript into a format that is appropriate for journal article(s). Set timelines. Hold the writing process as a priority to meet goals. Write on a continual basis, not just when in the mood. For example, create a writing schedule and build in accountability. Continue to develop and improve scholarly writing.

#2. Assess the Writing Process

The second recommendation targets assessment. Gathering information is the purpose of an assessment (Bagnato, 2005; McWilliam, 2002). The root word of "assessment" is from Latin meaning *get to know*.

Get to know the writing process. Personalize the writing process. There are at least two ways for a writer to assess their own scholarly writing through self-assessment and feedback from others.

Self-assessment is where the author reflects on their own writing (Philippakos, 2017). Use writing resources like Appendix A as a checklist when conducting a self-assessment of writing. All technical aspects of the scholarly manuscript will be addressed during the self-assessment. The process of evaluation can give authors a baseline.

Once baseline data are collected, make writing goals that are observable and measurable. Track performance on the goals. Then do follow up self-assessment to determine if the goals are being achieved. Subsequent assessments of writing can show progress.

Goal setting could involve short- or long-term planning. Another example of goal setting could be an author who is working on a long-term goal of transforming a dissertation into a scholarly manuscript that will be submitted to a journal. A short-term goal could be to identify a journal. Another writing goal could be to set aside an hour a day to write. While a final long-term goal could be to reformat the dissertation to meet the word count or page limit of the journal.

Feedback from others is another way to assess writing. Ask others to read the manuscript and give feedback on the form in Appendix A. It could be peers who review the manuscript, a mentor, a person who is not a specialist in the field of study, or other person who has experience with scholarly writing (Philippakos, 2017). Having input from a variety of people can be another way to assess progress with writing (Calle-Arango & Ávila Reyes, 2023; Fisher et al., 2020). Use writing resources like Appendix A as a checklist when assessing writing. Assess the writing process by strengthening manuscripts with input from various sources.

#3. Care for the Writer

The third recommendation has to do with caring for the writer. Self-care can support the scholarly writing process (Cannell et al., 2023). Adding more joy to writing can reinforce the process for the author (Chi, 2021).

Reinforcement for writing is a way to find motivation to write, especially when it is difficult. External reinforcers could be tangible, like a reward for writing where authors treat themselves to something they like or enjoy. It could be a new pair of shoes or jewelry. Incentives could help shape the practice of writing. Internal reinforcement could be the feeling of accomplishment when a writing task is completed. Celebrate small and big writing achievements.

Get involved with a writing community in which support from community members can be both given and accepted . The participating writers can share strategies with one another for coping with the writing process. Writer's retreats are a way to make scholarly writing a form of well-being (Moore, 2003; Papen & Thériault, 2018; Tremblay-Wragg et al., 2021); offering fellowship with others who are engaged in the writing process.

Continue to improve writing by taking classes, going to writing workshops, and reading books on writing. These are ways that can serve as inspiration for improving writing. Outcomes from formal and informal training can help writers get better at the craft of writing.

Write with other people. Co-authors can make writing less isolating (Aitchison, 2009; Waight, 2022). Writers learn writing tips from other writers too. Collaborate with others to explore opportunities to publish writing together.

Create an environment conducive to writing. Establish effective writing habits. Practice time management when writing to stay on schedule by making and keeping writing timelines. Take care.

#4. Revise Multiple Drafts with Ongoing Iterations of the Paper

The fourth recommendation has to do with revisions. The Merriam-Webster Dictionary defines the word "*revise*" as looking over yet again to adjust. Authors who are given the opportunity to revise may experience different ways that journal editors and reviewers indicate that adjustments are needed to the paper. Some ways in which Editors or Associate Editors might say a revision is in order are: "reject, revise, resubmit," or "major revision," or "minor revision," or other words showing the author has a chance to revise.

Scholarly writing is an iterative process. Revisions are part of the process of adjustments and making changes to the paper. Adopt a mindset where revising manuscripts is part of the journey in exploring a topic.

Sometimes it is difficult to know when the paper is ready to submit or resubmit to a journal. Authors can benefit from taking time to revise as long as needed until there is strong indication the paper is ready for submission to a journal while also staying within the journal's timeline. Knowing when a paper is ready can have positive outcomes for publication.

Rewriting and rethinking ideas in the writing process can improve the journal article when under revision. Scholarly discourse is a pathway to discovery. When revising the paper, imagine the writing process as a conversation with others (Macy et al., 2024). The author of *The House on Mango Street*, Sandra Cisneros, gave an interview where she shared her writing process. She explained how she writes her first draft as though she is having coffee with a good friend in a café. Her subsequent drafts are written as though she is imagining talking with a judgmental opponent. Insights gained during the revision process have the potential to make the paper better.

The manuscript may need to undergo several revisions before submitting or resubmitting it to an academic journal where it undergoes the review process. When receiving feedback on the manuscript from the journal, document all the revisions made to the manuscript. Respond to journal reviewer comments when revising the paper (Taylor, 2016).

Address requests, but know that not all feedback by each reviewer or Editor has to be followed or implemented in the revision. It will be helpful to create documentation when corresponding with the editorial team of the journal to share the journey of the paper. When writing a revision for a journal, be descriptive, professional, and do not hesitate to contact the Editor or Associate Editor if assistance is needed with challenges encountered while revising the paper. Revise multiple drafts with ongoing iterations of the paper to continually improve writing.

#5. Create a Thinking Aid

The last recommendation describes a thinking aid that could be used in the writing process to organize ideas for scholarly writing. In 1987, the behaviorist B.F. Skinner published an article about using a thinking aid to help with writing. His article has practical ideas for how to break down the writing process into manageable pieces (Skinner, 1987).

Writers need three things to create a thinking aid in the Skinner style: (a) notecards, (b) pen/pencil, and (c) a three-ring binder. Remove the three rings and spine from the binder so that just the front and back of the binder exists separately. Create notecards for all parts of the manuscript. Add notes to the notecards to the shell of the binders when generating ideas for the paper. Tape notecards to the shell. Move the notecards when new ideas replace old ones.

The thinking aid can make the writing process easier because all parts of the academic paper are in a tactile presentation that allows for moving ideas around. When ideas come to mind, they can be added to the thinking aid. It is a way of taking notes that is dynamic and ever changing. A thinking aid could be created in other ways too. Writers can use post it notes, the note taking function on a smart phone, artificial intelligence, or iPad/computer to organize ideas.

As the journal article starts to take shape, the thinking aid also changes. The thinking aid will look different at the end of the writing process compared to the beginning. Continue to refine the thinking aid throughout the writing process.

Writing for an academic audience can be a process for learning to navigate the publishing environment. Writers can contribute their voices when they publish journal articles. The process of writing was presented with recommendations for scholarly writing development, assessment, self-care, revisions, and thinking aid.

Conclusion

People have been trying to convey their thoughts for centuries. Petroglyphs are images that are found in rocks where people documented their ideas with primitive tools. Today, authors may have the same desire to communicate but with different tools and resources. Like the people creating the petroglyphs, authors document and share their ideas with others. Evolution of ideas can be traced in the body of literature created for a field (Shonkoff & Meisels, 1990; Zigler et al., 2006). Writers have things to say and creating a scholarly manuscript is like entering a conversation with a reader (Macy et al., 2024). Promoting the article after it is published will help readers locate and learn about the work. "Authors are encouraged to promote their article after its publication. One way they may do so is to develop short summaries describing their work in plain language and share these along with the article DOI through their social media networks" (American Psychological Association, 2020, p. 395).

Motivation to write is unique for each writer (Moore, 2003). Attention in managing the technical aspects of scholarly writing can help writers convey their thoughts in writing with the academic conventions that are needed to get writing published. Scholarly writing development with continuous improvement, assessment, self-care, revisions, and thinking aid strategies are recommended. This article presented a self-assessment that could be used like a do-it-yourself tool for evaluating writing from quantitative research designs. Using both the technical aspects of scholarly writing and these five recommendations, authors can say what they need to say with their writing. Publish what needs to be said to make the world a better place for children, their families, and teachers. Scholarly writing can be a place for community to come together to share ideas for professional dialogue.

Appendix A

Manuscript (MS) Review Form.

To:
From:
Today's date:
Type of Manuscript (MS) circle: *Thesis Dissertation Journal Article Other.*
Milestone:
Title and Abstract

MS components	MS questions	MS comments
Title	Does the title summarize the main idea of the paper? Does the title have a length of 15 words or fewer? Does the title include only words that contribute meaning? Does the title feature the findings, implications, and/or significance?	
Abstract	Is the abstract less than 350 words? Is the abstract written in the past tense? Does the abstract include: -purpose -research method -participants -the problem -study results -conclusions, and -recommendations	

Introduction

MS components	MS questions	MS comments
Background	Is there an overview that provides a context for this study?	
Problem Statement	Is there a specific problem identified?	
Purpose of the Study	Is the purpose sentence closely aligned with the problem statement?	
Research Questions	Are the variables clearly articulated and aligned with chosen method?	
Nature of the Study	Is there a discussion of the proposed research method (quantitative, qualitative, or mixed)?	
Significance of the Study	Does it show why the study is important and describes the contribution(s) to the field of study?	
Definition of Key Terms	Are key terms identified?	
Summary	Is this section is well written?	

Literature Review

MS components	MS questions	MS comments
Documentation	Is the literature search strategy explained? Are library and search engine sources described? Is there enough coverage? Is content from peer-reviewed scholarly sources published in the last 5 years?	
Theme/Subtopic	Is the theoretical or conceptual framework(s) described for this study?	
Summary	Is this section well written?	

Method

MS components	MS questions	MS comments
Research Method and Design(s)	Are the methods clearly articulated and feasible?	
Population	Is the population described?	
Sample	Is the sample size described?	
Materials/Instruments	Are materials and/or instruments described?	
Operational Definition of Variables	Are operational variables defined?	
Data Collection, Processing, and Analysis	Are data collection and analysis explained?	
Assumptions	Are assumptions described?	
Limitations	Are limitations brought up?	
Ethical Assurances	Are ethical assurances described (e.g., IRB)	
Summary	Is this section well written?	

Results

MS components	MS questions	MS comments
Results	Is a brief overview of the section provided? Does the section begin with a brief overview of the purpose of the research study? Are the data analyses reported without discussion (interpretation, speculation, etc. as it should appear in the next Discussion section)? Does the results section give appropriate descriptive information, as well as implications for the profession? Are results presented in a logical fashion, answering the research question(s)/hypotheses as stated and appropriate to the type of data collected? Are assumptions of statistical tests identified and any violation of assumptions addressed? Are decisions based on the results of the statistical analysis (for example: Are the results statistically significant?)? Compliance with style format (e.g., APA, Chicago, etc.) of tables, table titles, figures and figure captions?	
Evaluation of Findings	Are reported findings discussed and what they mean? Are results interpreted considering the context and/or the conceptual framework(s) that have been identified? Is a description included about whether the results obtained were expected given the literature and provide potential explanations for unexpected or conflicting results? Is a brief interpretation provided within the study context and profession? Are findings in terms of the originality of the contribution identified and discussed? Is it clear how the profession and/or field of study are affected by your inquiry? Are conclusions drawn that avoid going beyond what can be interpreted directly from the study results?	
Summary	Is there a summary of key points?	

Discussion

MS components	MS questions	MS comments
Implications	Does the Discussion section begin with a brief review of the problem statement, purpose, method, limitations, and ethical dimensions, and conclude the introduction with a brief overview of the section? Is each research question discussed and (when appropriate) hypothesis individually, and draw logical conclusions? Are potential limitations that may have affected the interpretation of the results discussed? Are results discussed in terms of how they respond to the study problem, fit with the purpose, demonstrate significance, and contribute to the existing literature described in the Introduction section? Are implications described considering the literature described in the Introduction section and applied in the context of the profession/field of study? Is the practical utility explained in terms of potential ways of applying conceptual frameworks, models and processes directly in real contexts, specifically related to the particular study context and to the broader social context?	
Recommendations	Are all recommendations supported with the research findings? Are recommendations for future research made?	
Conclusions	Are all key points summarized?	

References

MS components	MS questions	MS comments
Implications	Have significant works been properly cited? Some journals require statements for artificial intelligence used in the writing. Have those been followed? Does the journal article present appropriate citations for ideas presented in the text? Are there proper attributions to the author(s) who contributed the ideas that are cited in the article? Are sources cited from peer-reviewed journals? Is everything in the references section that was cited within the text? Are there citations in the references section that were not cited in the text that need to be removed?	
Recommendations	What writing style conventions are used for citing work? Do the citations in the references section follow writing style guidelines and conventions? Are all recommendations for works cited followed?	
Conclusions	Are references correctly cited?	

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