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## A Protocol for Co-Authored Academic Writing: The “Draft-in-a-Day”

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## A Protocol for Co-Authored Academic Writing: The “Draft-in-a-Day”

### Abstract

The iterative process of writing a co-authored manuscript may take several months to complete. Draft-in-a-day is an alternative group-based approach to writing that draws on concepts from social cognitive and group dynamics theories to efficiently write the first draft of a manuscript, while providing rich opportunities for trainees to develop their writing skills. The purpose of this paper is to explore the usefulness and acceptability of draft-in-a-day by examining individual’s experiences using the draft-in-a-day protocol. Twelve participants (four professors, eight trainees) who had used the draft-in-a-day protocol completed an online questionnaire about their experiences. Participant responses were analyzed using Braun and Clark’s (2006) thematic analysis. There were four broad themes: group / social aspects, writing process, effectiveness / efficiency, and other. Overall, participants found a benefit to using the draft-in-a-day protocol for team-based writing. Participants were receptive to the draft-in-a-day method of writing, reported being very likely to use it in the future ( $M = 4.9$ ,  $SD = 0.28$ ; scale 1-5), and provided suggestions for improvement. This early-stage research provides a framework for efficient group-based writing in sport and exercise psychology.

Le processus itératif d'écriture d'un manuscrit co-écrit en psychologie du sport et de l'exercice peut prendre plusieurs mois. Le brouillon en-un-jour est une approche alternative de l'écriture en groupe qui s'appuie sur des concepts de la psychologie du sport et de l'exercice pour rédiger efficacement la première ébauche d'un manuscrit, tout en offrant aux stagiaires de riches opportunités de développer leurs compétences en écriture. Le but de cet article est d'explorer l'utilité et l'acceptabilité du brouillon en-un-jour en examinant les expériences des individus utilisant le protocole du brouillon en-un-jour. Douze participants (quatre professeurs, huit stagiaires) qui avaient utilisé le protocole de brouillon en-un-jour ont rempli un questionnaire en ligne sur leurs expériences. Les réponses des participants ont été analysées à l'aide de l'analyse thématique de Braun et Clark (2006). Il y avait quatre grands thèmes: les aspects de groupe / sociaux, le processus d'écriture, l'efficacité / l'efficience et autres. Dans l'ensemble, les participants ont trouvé un avantage à utiliser le protocole de brouillon en-un-jour pour la rédaction en équipe. Les participants étaient réceptifs à la méthode d'écriture du brouillon en-un-jour, ont déclaré être très susceptibles de l'utiliser à l'avenir ( $M = 4,9$ ,  $SD = 0,28$  ; échelle de 1 à 5) et ont fourni des suggestions

d'amélioration. Cette recherche préliminaire fournit un cadre pour une écriture de groupe efficace en psychologie du sport et de l'exercice.

*Keywords:* writing; pedagogy; group dynamics; social learning theory

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Learning to write in graduate school is typically performed individually by the graduate student with delayed, iterative rounds of feedback from a supervisor. A supervisor may meet with the graduate student about the feedback, then the student revises and writes more. Graduate students may be able to learn from the feedback *if* they purposefully reflect on the feedback. However, this “iterative approach” to writing may take several months and may fail to provide opportunities for developing early draft writing skills considering immediate feedback may be more effective at improving writing skills (Swart et al., 2019).

Students may not have had experiences in academic writing to sufficiently develop their writing skills, as suggested by findings that 11% of college seniors are able to write at the “proficient” level (American Association of Colleges and Universities, 2005). It is likely that many undergraduate students will not have the experience of scholarly writing (e.g., co-authoring a manuscript for peer review). Even at the graduate level, lack of communication skills is a well-acknowledged gap in training (Kuehne et al., 2014). One way to improve scholarly writing may be through experiential learning practices, which have been shown to improve writing outcomes (Coker et al., 2017). Experiential writing can keep graduate students interested in continuing their degrees (Kuh, 2016) and promote student achievement in STEM (Peters et al., 2019).

In this paper, we outline a writing approach called “draft-in-a-day” that provides students with an in-person, experiential learning opportunity to write a first draft alongside their supervisor(s) and other researchers. The goal is to complete a “no-shame first draft” containing all the main points in a single sit-down session, without much concern for perfectly articulating sentences and grammar. This may be important given perfectionism is an often-reported barrier to efficient writing and contribution to writing blocks (Boice, 1993). We outline how draft-in-a-day leverages core concepts from social learning and group dynamics theories to provide a rich opportunity for graduate students to learn how to efficiently put ideas to paper. In this paper, familiar theories are discussed in the context of the draft-in-a-day approach to academic writing. Findings from a process evaluation on draft-in-a-day are reported, and it is suggested that this efficient approach may lead to better learning and writing outcomes compared to the traditional iterative approach.

### **Social Cognitive Theories**

Social learning theory (Bandura & Walters, 1977) is parent theory to many social cognitive theories (e.g., Bandura, 1986). Social learning theory suggests that people learn from one another through observation, modelling, and imitation. Within the context of writing groups, less experienced members can observationally learn skills like writing paragraph outlines, quickly putting words to paper without being bogged down by needing to write the perfect sentence, staying task-focused, and overcoming writing blocks. While some of these learning opportunities can be developed using the

iterative writing approach, in-person group-based writing processes, like draft-in-a-day, may have greater potential for learning opportunities based on concepts from social learning theory.

Stemming from these concepts, social cognitive theory suggests that mastery and vicarious experiences are two of the strongest sources of information to help individuals to strengthen their self-efficacy and skills (Bandura, 1986). In-person group-based writing leverages these concepts to help graduate students develop the confidence and skill for efficient writing. Feedback is typically delayed using the iterative writing approach, whereas the draft-in-a-day approach allows for real-time, in-person feedback that may strengthen mastery and confidence. For example, being part of a group discussion on how to rephrase a section could enhance students' understanding of how to work through these challenges and their confidence to handle similar writing challenges in the future. Indeed, students have been shown to have increased self-efficacy as a result of engaging in different research processes (e.g., writing; Lopatto, 2007).

### **Group Dynamics**

Groups can be leveraged as a medium of change that can exert social influence to help teach or train individuals (Cartwright, 1951). Kurt Lewin (1948) proposed that small groups, consisting of teachers and students, can be an effective means of education when all group members share the same goal with a shared purpose. Group and social forces function to enhance students' learning opportunities while producing a stronger manuscript during group-based writing. Based on the literature, effective writing groups that have the following five qualities create an efficient working environment:

1. have a shared goal;
2. individuals are motivated and invested in;
3. clear roles;
4. individually-assigned tasks; and
5. contribute to the group goal.

Collaborative group approaches have been shown to increase collective efficacy which improves task effectiveness (Du et al., 2019). Group-based writing enhances learning and can improve critical thinking (Cliff Hodges, 2002). As such, collaborative writing may be an effective means to foster effective writing practices.

### **Evidence of Small Group-Based Writing**

Collaborative or small working groups have been studied since the 1980s as an effective social process for producing high-quality outcomes, while simultaneously providing opportunities for skill development. Within a supervisor-graduate student

context, Vygotsky's (1978) Zone of Proximal Development (ZPD) helps to explain how this might occur more effectively using the draft-in-a-day approach.

The ZPD is defined as the distance between what a learner can do without help, and what they can do with support from a knowledgeable supervisor or in collaboration with more capable peers (Vygotsky, 1978). Collective scaffolding is a core concept within the ZPD used in understanding group learning processes. Collective scaffolding occurs when groups, consisting of a range of skill levels, pool their knowledge to mutually guide each other through problem solving and writing tasks (Donato, 1994). Generally, those with more experience (i.e., supervisors, experienced researchers) control the elements of the writing task that are initially beyond the learner's capability, thus permitting them to concentrate upon and complete only those elements that are within their range of competence (Wood et al., 1976). In the context of in-person group writing, this could mean assigning certain manuscript sections or paragraphs for graduate students to write (e.g., Master's student could be provided with bullet-point methods, postdoc could be assigned part of the discussion).

Much published literature has focused on group-based learning focused solely on undergraduate populations (e.g., Johnson et al., 2006; 2014), rather than on approaches to graduate-level writing or for writing groups comprised of authors at different levels of their academic career. A meta-analysis of 168 studies found that cooperative learning led to superior outcomes when compared to competitive and individualistic learning in college students (Johnson et al., 2006). Other research has focused on academic writing groups where individuals write in groups but on their own work to leverage social forces like accountability (e.g., Chai et al., 2018; Refelts et al., 2019).

Recently, Dahl et al. (2022) examined the feasibility and acceptability of a synchronous collaborative approach to manuscript development called "Paper Chase." Paper Chase is a student learning approach with nine asynchronous writing modules. Students learn fundamental skills in manuscript development for more novice academic writers (e.g., Citation, Journal Logistics) and is followed by a four-to-five-day writing "marathon." This approach was effective for rapid manuscript development in a sample primarily comprised of undergraduate students. To our knowledge, we are unaware of group-based writing protocols for co-authors at multiple levels of their academic career. The draft-in-a-day has a particular focus on trainees with some academic writing experience and may be particularly helpful for teams with co-authors at different levels of their career. The protocol involves a one-day working meeting to iteratively plan, write, and revise (time allowing) the first draft of an academic manuscript. The purpose of this paper was to explore individuals' experiences using draft-in-a-day. Specifically, the usefulness and acceptability of draft-in-a-day was examined.

## Method

### Participants and Procedure

Fifteen individuals who had used the draft-in-a-day protocol were recruited to participate in this study, of which 12 participated. Eligible participants were researchers (university faculty and trainees) who had used the draft-in-a-day protocol within the past six months. We provided each writing team with the draft-in-a-day protocol. Within six months of using the protocol, team members were sent a 15-minute online questionnaire to complete. Research ethics was obtained by a Canadian University's research ethics board and all participants provided informed consent.

### Draft-in-a-Day Protocol

The kernel of the idea for draft-in-a-day was sparked from a Tweet that one co-author saw in 2018 regarding tips for efficient scholarly writing. While we cannot recall the specific Tweet or account, the tips were generic writing efficiency tips (e.g., get all co-authors in a room together, shut phones/email off). Approximately a year later and recalling the helpful tips, SL and MJ developed the draft-in-a-day protocol. Please see Appendix 1.

#### *Phase One: Preparation*

Phase one involved providing the writing group with background literature, study protocols, and the main results. The purpose of this phase was to ensure that writing group members, particularly trainees, have sufficient background knowledge on the topic and an understanding of the primary outcomes that would allow them to collectively develop an outline. Authorship should be determined by existing criteria (e.g., the International Committee of Medical Journal Editors, 2022). It is suggested that the group establish ground rules ahead of time for the draft-in-a-day phase such as limited email or cell phone use.

#### *Phase 2: Draft-in-a-Day*

The second phase involved meeting as a group to complete a rough manuscript draft containing all the main points in one sit-down session. The day began by having the group collectively plan the manuscript outline and brainstorm main points for each paragraph. Coming to a mutually agreed upon outline at the onset saves substantial re-writes during the revision phase, especially for interdisciplinary groups who may have very different styles of introducing a manuscript (e.g., clinical versus theoretical focus). Manuscript sections were then assigned, and the group split off to write.

Sections can be assigned based on content knowledge and level of training. For example, junior trainees will have some background in research methods and could be

provided with previously written protocols or ethics documents to assist in their writing parts of the method section. Team members were instructed to put words to paper and not to worry about perfect grammar or sentence structure. After approximately 60-90 minutes, the group “checked-in,” which entailed co-authors updating the group on their progress, sharing writing challenges, asking for clarification, and establishing each co-author’s writing task for the next 60- to 90-minute period. In evaluating progress, group members can continue with the section that they were previously working on or switch sections. This process continued three more times.

Group members were encouraged to save minor writing questions for the check-ins. When a writing block was encountered, members were encouraged to quickly ask the assistance of another group member or to switch writing sections. The idea is to keep putting words to paper. When group members completed a section, they proceeded to another. Towards the end of the day, team members can begin revising completed work. For our group, the last hour of the day involved evaluating progress and devising a clear plan/timeline for revising the manuscript to the point of submission. If there are paragraphs still to be written, the team is encouraged to bullet-point their content. Setting a schedule for who will move parts of the manuscript forward and in what order helps to progress the manuscript to submission. Mutually agreeing upon a revision schedule may also help co-authors commit to providing timely feedback (Klein & Mulvey, 1995).

## Measures

After providing demographic information, participants were asked seven open-ended questions about their experience using the draft-in-a-day protocol. Participants were asked to reflect on the preparation phase and the draft-in-a-day writing phase. See Appendix 2 for a list of survey questions. Briefly, participants were asked to explain how useful it was, what challenges were encountered, what were the benefits/strengths, and suggestions for improvement. They were also asked, *“How did the draft-in-a-day approach compare to your typical process of writing this type of co-authored manuscript?”*

Participants also responded to two Likert-type questions about the draft-in-a-day approach. First, they were asked, *“On the scale below, please indicate your preference in writing approach for multi-authored manuscripts.”* Preference was rated on a 5-point scale ranging from 1 (strongly prefer my typical writing approach) to 5 (strongly prefer the draft-on-a-day writing approach). Second, they were asked, *“On the scale below, please indicate the likelihood of you using the draft-in-a-day approach in the future”* on a 4-point scale ranging from 1 (very unlikely) to 5 (very likely).

## Analysis

An inductive thematic analysis was used to analyze the data in Excel using Braun and Clarke's (2006) method. Two coders (SL, JO) read through the responses several times to familiarize themselves with the data. Next, initial thematic codes were separately generated by JO and SL across the entire dataset. Codes were collated and disagreements were discussed until agreement was reached. Next, codes were grouped into broader themes and subthemes. Finally, themes were re-named, and exemplar quotes were selected to produce findings for the manuscript.

## Results

Participants were 12 academics (two assistant professors, one associate professor, one full professor, three postdoctoral fellows, two PhD students, two Master's students, and one undergraduate research assistant; nine self-identified women and three men) who completed the online survey. All participants were from an exercise and health science faculty. Some participants used the draft-in-a-day approach on more than one occasion (*Mean* = 2.0, range 1-4). In total, eight manuscripts were drafted by the 12 participants which were comprised of eight unique combinations of authors from three research labs and one interdisciplinary research group. Manuscript drafts reported using a variety of different research methods including qualitative, quantitative, consensus, review, and evaluation. The research from seven of the manuscripts focused on health or physical activity across samples with different chronic conditions, while one focused on knowledge translation.

### The Preparation Phase

Analysis revealed four broad themes: group/social aspects, writing process, effectiveness/efficiency, and other (see Table 1 for a full list of themes and subthemes). Agreement was 86% after the initial round of coding; it then reached 100% after discussion.

**Table 1**

*Themes and Subthemes from Participants' Views About the Preparation Phase*

Themes	Subthemes (count)	Example quotes
<b>Strengths</b>		
Effectiveness/efficiency	Providing the primary author with a framework to prepare and assign roles prior to the writing day (10)	<i>"The preparation protocol helped us to plan the tasks and provide everyone with the required steps so that the day could begin more seamlessly."</i>
Group/social	Motivating authors to sit down to write (5)	<i>"As a co-author I really felt that I contributed to the paper a lot. It was also motivating to experience (again)"</i>

		<i>that writing a first draft of the introduction shouldn't take that long (less than a day)."</i>
Writing process	Helping trainees to become more familiar with the research background (1)	<i>"I believe it helped to prepare me very well. I knew exactly what my role was before we sat down to write, so I was able to do the appropriate reading and making notes for the sections that I would be heavily involved in."</i>
	Reminding co-authors about the study protocol (4)	<i>"It was very good preparation in giving us the methods and findings for writing the Intro/background and discussion."</i>
	Helped the team plan the paper (6)	<i>"My team held a group meeting leading up to the manuscript-in-a-day. During these meetings, the research questions were refined, the analysis plan was completed, and the "story" of the paper was clearly communicated, which greatly helped the writing portion on the manuscript-in-a-day meeting."</i>
Other/general positive (4)		<i>"Preparation went well."</i>
<b>Challenges</b>		
Writing process	Finding time for the background preparation (1)	<i>"It was difficult to find the time to do prep work."</i>
	Establishing writing sections during the preparation phase (1)	<i>"Deciding which sections should be done by which authors before the meeting."</i>
<b>Suggested modifications</b>		
Effectiveness/efficiency	Have a group meeting prior to the draft-in-a-day (1)	<i>"I would have preferred to have a discussion prior to the meeting to discuss which portion of the manuscript would be assigned to each author, so that I may have better prepared to write my specific section."</i>

All participants reported that the preparation phase was helpful for providing a structure leading into the writing day. In discussing the writing process, one participant noted, *"I believe it helped to prepare me very well. I knew exactly what my role was before we sat down to write, so I was able to do the appropriate reading and making notes for the sections that I would be heavily involved in. It helped make the writing process less daunting."* Participants also reported several strengths to the preparation phase including, providing the primary author with a framework to prepare for the writing day, motivating the authorship team leading into the writing day, helping trainees become more familiar with the research background, reminding co-authors about the study protocol, and helping the team plan the paper ahead of time. As one participant noted, *"The prep phase was critical! Makes the actual writing day work SO much better."* It was also suggested that the better the quality of preparation, the more productive the draft-in-a-day was. One author who wrote multiple papers using this method remarked, *"The more thorough the background papers that were sent were, the more prepared I was. In the instance where little was sent around, then it was not helpful. Likewise, if I failed to do my prep work, the less productive the day was."*

While most participants did not report any challenges during the preparation phase, one busy faculty member reported that it was difficult to find the time to do prep

work. To help ensure high quality preparation, one participant suggested adding group meeting to the preparation phase prior to the draft-in-a-day to review documents. Another participant furthered this by suggesting that individual writing sections could be assigned during the preparation phase to allow co-authors more time to prepare.

### The Draft-in-a-Day Phase

Table 2 summarizes the themes and subthemes of participants' feedback regarding the strengths, challenges, and improvements for the draft-in-a-day writing approach. There were four broader themes: group/ social aspects, writing process, effectiveness/efficiency, and other. Participants reported several key strengths of the draft-in-a-day approach. There were group/ social benefits that included being more motivating and enjoyable to write compared to other writing experiences, improved group dynamics, obtaining immediate feedback from co-authors, and increasing buy-in from the writing team.

**Table 2**

*Themes and Subthemes from Participants' View About the Draft-in-a-Day Phase*

Themes	Subthemes (count)	Example quotes
<b>Strengths</b>		
Group/ social	Motivating/Fun (4)	"Keeps the group motivated as a whole to write (sometimes it is difficult to stay motivated writing)."
	Improves group dynamic/ teamwork (12)	"It felt much more collaborative than other writing approaches."
	Get immediate answers from co-authors (5)	"Questions were able to be quickly answered across the table, rather than having to wait for an email reply."
	Helps to get buy in from entire co-author team (4)	"As a co-author, I had more of a say in the writing than I might normally."
Writing process	Helps overcome writing blocks (2)	"If you're stuck on certain sections of a manuscript (e.g. hit a writing block), you can switch among your co-authors to give all of the sections a new perspective."
	Learning experience (2)	"I also think it is useful for trainees to experience firsthand that everyone has struggles when they are writing and that even an experienced writer sometimes struggles to word something correctly or that they need to bounce ideas off of others. Trainees can also learn strategies from more senior colleagues."
Effectiveness /efficiency	Strength based approach for writing (7)	"Sections were allocated to those who were most familiar with the necessary content - this allowed for efficient and effective writing."
	Faster way to get ideas to paper (17)	"It was efficient and helped to foster discussion about interpreting the data and ensuring flow between the sections."
<b>Challenges</b>		
Writing process	Lack of preparation and access to background information (7)	"One of the challenges was that the area of research was a little foreign to me, so I had to go find and look back at

		<i>other articles and this felt like it was eating into my writing time for the day."</i>
	Concurrently writing certain sections (1)	<i>"My one challenge was that I was writing the introduction and at the same time we were discussing the findings of the study. Sometimes it slowed me down a bit. But on the other hand, the paper needed that discussion as well."</i>
	Staying on task (2)	<i>"It was hard to stay off email and other work tasks, even though I recognize the need and value of this."</i>
<b>Suggested Modifications</b>		
Writing process	Reinforced importance of following the protocol (4)	<i>"This isn't a suggestion, but organization of necessary documents appears to be a key time saver."</i>
	Effective referencing (1)	<i>"When providing references for sections you are particularly writing, try to give as much detail as possible so that the first author doesn't spend a large amount of time searching for references."</i>
	Establish authorship (1)	<i>" [need to] add a section on how authorship should be discussed and divided in advance of the day. Although optimally this would have been done at the onset of the research."</i>
Effectiveness / efficiency	Quicker turn around after study completion (2)	<i>"It would be beneficial to have the manuscript-in-a-day take place shortly after the study is completed."</i>
Group/social	Outlining group tasks (5)	<i>"I would suggest that you need a strong leader who can help junior researchers when they are struggling or stuck."</i>

Participants also highlighted benefits of the draft-in-a-day protocol to the writing process. Specifically, it was thought to provide a strong learning experience and help co-authors learn to overcome writing blocks. Finally, participants noted the protocol was effective/efficient for writing a manuscript draft compared to previous experiences. Specifically, some noted the strengths-based approach to assigning writing sections was particularly effective, while most participants noted that the protocol was a faster way to get ideas to paper. For example, one participant noted, *"Sections were allocated to those who were most familiar with the necessary content - this allowed for efficient and effective writing."*

However, there were a few noted challenges reported when using the draft-in-a-day protocol regarding the writing process that included: a lack of access to background information, having multiple authors concurrently write multiple sections made it more difficult to align sections following the writing session, and staying on task (i.e., not checking emails for an entire day). Of note, half of the participants reported no challenges in either phase of the draft-in-a-day protocol. Suggestions to improve the writing process include ensuring the strengths of each co-author is matched to the right section of the draft, establishing a consistent referencing strategy, and aiming to use

draft-in-a-day closer to the end of data collection. One participant also suggested including a discussion about determining authorship as part of the process.

In comparing draft-in-a-day to participant's typical writing approaches for multi-authored papers, participants generally preferred draft-in-a-day. For example, one participant noted, *"The draft-in-a-day is more efficient, as you are more focused on getting content on the paper and you care less about the 'nice sentences'. When I write a manuscript as a first author by myself, I tend to spend too much time editing (or references) before all the content is actually there. That is slowing down the writing process a lot."* Another mentioned an improved writing process, making it easier to revise subsequent versions saying, *"Reviewing next versions of the paper is easier because you know how the paper looks like - and more importantly what decisions were made."* One participant had a lukewarm view of the writing process saying, *"I tend to like to write in the quiet of my own space as I find it less distracting but I think this approach has real merit and will be using it again."*

When asked to rate their preference for the draft-in-a-day writing approach compared to their typical writing approach, participants were more strongly in favour of the former ( $M = 3.9$ ,  $SD = 1.4$ ). Participants reported being very likely ( $M = 4.9$ ,  $SD = 0.28$ ) to use the draft-in-a-day writing approach again.

## Discussion

While other strategies for group-based writing have been proposed (e.g., Dahl et al., 2022; Redelfs et al., 2019), the draft-in-a-day protocol was conceptualized as a method to collectively write the first draft of an academic manuscript. Overall, participants thought that draft-in-a-day was an efficient means for completing a first manuscript draft that offered trainees opportunities to develop their writing skills. Participants' feedback highlights important components and strengths of this writing protocol.

Several of the strengths that fell within the group/social theme align with group dynamics and social learning perspectives. The preparation phase may serve to initiate group processes advantageous for efficient and effective writing. Participants noted forming common motivations and group goals in the preparation phase. This supports research demonstrating group goals can result in greater goal commitment and performance (Klein & Mulvey, 1995). Then, to start the draft-in-a-day, groups assigned individual writing tasks that contributed to the group goal. Participants reported enhanced motivation and perceptions of "fun" during the draft-in-a-day process, which supports group principles for creating effective, and perhaps more cohesive, working environments (Klein & Mulvey, 1995). Collective group norms around expedient writing may have helped participants from getting bogged-down in crafting perfect sentences, which they might have otherwise done when writing alone. Draft-in-a-day may leverage social forces similar to what has been shown in other group-based writing

initiatives (Chai et al., 2018). However, draft-in-a-day is the first protocol, to our knowledge, that seeks to leverage social forces for co-author groups working on the same manuscript, not just a collective of individuals working on their own papers (Chai et al., 2018; Refelfs et al., 2019).

In line with social learning theory (Bandura & Walters, 1977), participants reported learning outcomes related to observing others during the writing process (e.g., how to outline a paper and overcome writing blocks). Draft-in-a-day may offer greater potential for opportunities to observe others during the writing process that trainees might not otherwise acquire through more traditional approaches to writing (e.g., watching how others work through writing blocks or put words to paper without regard for perfection). Scaffolding trainees' writing experiences was also used as a means of training. In support, one primary author took a strengths-based approach in matching trainees' skillsets to different sections. Findings align with past work highlighting the benefits of experiential and collaborative writing opportunities (Coker et al., 2017; Du et al., 2019).

One potential benefit that draft-in-a-day offers includes necessitating writing groups to collectively agree on an outline, which could prevent future substantial rewrites. Relatedly, developing a revision plan at the end of the day can expedite the manuscript's completion and increase co-authors' commitment to the revision timeline. Finally, draft-in-a-day may lessen the pressure of writing every sentence perfectly the first time and help to alleviate writing blocks.

From our perspective, the most significant hesitation to using this writing approach will undoubtedly be about quality. Does the efficiency of draft-in-a-day come at the cost of manuscript quality or thinking time? We argue that the efficiency of this approach should not come at the cost of quality and that this process can enhance manuscript quality by using a strengths-based scaffolded approach. The approach allows time for pre-thought and post-revisions. If the end goal is to create a perfect first draft, then greater concern to quality may be warranted. However, the goal is to make the first, and arguably most time-consuming, part of the writing process more efficient by putting words to paper. Just like writing a manuscript using other writing approaches, groups should be diligent in revising subsequent versions of the manuscript, for which the draft-in-a-day might also make more efficient. However, groups may face the challenge of needing to weave together manuscript sections written with differing writing styles or qualities. Participants' responses support the notion that the efficiency of draft-in-a-day did not come at the cost of effectiveness.

### **Limitations and Future Directions**

The current study represents an early stage of the research process, and we are limited in our ability to draw conclusions about the effectiveness of our approach.

Findings provide preliminary support for future research examining draft-in-a-day using more rigorous designs comparing one or more writing approaches (e.g., using pre-post, randomized designs). Future research could also use experimental methods to examine the difference in time commitment and quality between different writing approaches. Another limitation of this research is that participants are colleagues and trainees known to the study authors. While every effort was made to solicit anonymous and critical feedback about the draft-in-a-day protocol, it is possible that existing relationships influenced feedback or resulted in an overestimated responsiveness to the method. The participants in the current research were physically in the same room during the writing process. In the future, draft-in-a-day could be examined using virtual modes of communication (e.g., Skype, Zoom). Similar to the “Paper Chase” methods (Dahl et al., 2022), future iterations of draft-in-a-day could include academic writing modules for more novice academic writers.

### Conclusion

The current study represents an early research stage examining perceptions about using the draft-in-a-day writing approach. In general, the approach was viewed favourably, and most participants indicated their preference in using this approach to co-authored writing. Participant feedback aligns with concepts from group dynamics and social cognitive theories, helping to frame potential mechanics of draft-in-a-day. Beyond being well-suited for mentorship, draft-in-a-day may also be an efficient means for research groups to agree on an outline and write up their findings.

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### **Appendix 1: Draft-in-a-day Protocol**

The purpose of draft-in-a-day is to iteratively plan, co-write, and revise (time allowing) the first draft of an academic manuscript.

#### **The preparation phase**

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##### **Objectives**

1. Become familiar with literature relevant to the manuscript
2. Be familiar with the study protocol

3. Analyze (if not already completed) and review the data

#### Tasks

- Circulate relevant articles to the team to read
- Email the study protocol to the team to review
- Analyze the data (if needed) and circulate the results to the team
- Tailor the example draft-in-a-day agenda and email it to the team
- Optional: assign writing sections ahead of time to focus preparation<sup>†</sup>

#### Helpful hints

- Make time to do the preparation readings<sup>†</sup>
- The results do not need to be written, but having tables or figures helps
- Optional: Determine the intended journal for submission and familiarize yourself with its' submission requirements

### The draft-in-a-day phase

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#### Objectives

1. Develop a structure/outline for the manuscript
2. Write a complete first manuscript draft as a team
3. Develop a plan to revise the manuscript up to the point of submission

#### Helpful hints

- Have relevant research articles, study protocols, and study data on-hand
- Limit distractions (shut of email, phone, avoid your regular office)<sup>†</sup>
- Be open to asking and answering questions, but try to save minor questions for the check-ins
- Put words to paper; do not to worry about perfect grammar or sentence structure
- If you feel like you have hit a wall in trying to articulate a certain argument or paragraph, pass it off to someone else and start something different.
- Match strengths of writing team members to manuscript sections<sup>†</sup>
- If you are running out of time at the end of the day, bullet out the key points of the paragraphs yet to be written
- Provide sufficient detail to allow the references to be quickly compiled (e.g., paste link to article in comment bubble)<sup>†</sup>

Note: <sup>†</sup>indicates content added to protocol based on participant feedback

#### Example agenda

8:00-8:45am:	Discuss the structure/outline of the paper (e.g., intro/paper narrative, approach to methods section, key results, primary discussion points) Assign sections – set rough estimates for the length for each section
8:45-10:30am	Write

10:30-11:00am	Check in and evaluate progress. Discuss and address any writing challenges or questions
11:00-12:00pm	Write
12:00-1:00pm	Break for lunch and a mental/physical refresh
1:00-1:15pm	Check in and evaluate progress.
1:15-3:00pm	Write
3:00-3:15pm	Check in and evaluate progress. If certain sections are not fully written, discuss and bullet points the main points
4:00pm (optional if time)	Authors that have completed their writing tasks may begin to revise completed sections. Focus on big-picture revisions (e.g., are any main points missing/ needing to be written?)
4:30-5:00pm	Set a schedule for which co-author will complete or revise the manuscript and in what order.

## Appendix 2: Survey Questions

### Demographic questions

1. What is your gender?
2. What was your role in the manuscript (e.g., primary author, senior author, co-author)?
3. What is your academic role (e.g., faculty, postdoc, undergraduate, masters, phd student)?
4. What is the title of the manuscript you were working on? If you have worked on more than one, please state them all.
5. Using keywords, please briefly describe the type of manuscript you were writing (e.g., review, commentary, quantitative, qualitative, thesis, other)?

### Please reflect on the preparation leading up to MS in a day.

6. How well did the manuscript-in-a-day preparation protocol prepare you for the writing session?

7. Did you have any challenges in preparing for the writing session? If so, please explain.
8. Were there any benefits to the preparation phase? If so, please explain.

**Please reflect on the process during the day-of MS in a day.**

9. What were the strengths of the manuscript-in-a-day writing approach?
10. Did you have any challenges during the manuscript-in-a-day writing session? If so, please explain.
11. Do you have any suggestions for improving of the manuscript-in-a-day protocol? If so, please let us know.
12. How did the manuscript-in-a-day approach compare to your typical process of writing this type of co-authored manuscript?
13. On the scale below, please indicate your preference in writing approach.
  - Strongly prefer my typical writing approach
  - Mildly prefer my typical writing approach
  - No preference
  - Mildly prefer the manuscript-in-a-day writing approach
  - Strongly prefer the manuscript-in-a-day writing approach
14. On the scale below, please indicate the likelihood of you using the manuscript-in-a-day approach in the future.
  - Very unlikely
  - Somewhat unlikely
  - Somewhat likely
  - Very likely
  - Unsure / prefer not to respond
15. Do you have any other feedback?

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**About the Authors**

**Sean Locke** is an Assistant Professor at Brock University in the Department of Kinesiology and runs the REFRAME lab (REFraming Rehabilitation Adherence, Motivation and Exercise lab). Sean is a health behaviour change scientist who focuses on developing interventions to modify health-related cognitions and behaviours to help individuals rehabilitate back to a healthier functional status.

**Jenna Osborne** is a Master's student at Brock University in the Faculty of Applied Health Sciences. Jenna's current research focuses on understanding factors that promote physical activity during pregnancy and the postpartum period.

**Dr. Mary Jung** is an Associate Professor at UBC in the School of Health and Exercise Sciences at the University of British Columbia Okanagan Campus and the Director of the Diabetes Prevention Research Group (DPRG). Mary's passion is researching the self-regulation of health behaviours, primarily the promotion and adherence to physical activity and health diets in people living with, or at risk of, type 2 diabetes. Dr. Jung strives to see evidence-based lifestyle interventions implemented in the community to serve those in need.

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