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The Undergraduate Writing Retreat: A Group Writing Program to Increase Student Writing Self-Efficacy and Academic Wellbeing

ABSTRACT

Writing retreats are a staple of career development for scholars within higher education. Group writing structured around dedicated time, protected space, and peer participation delivers cognitive, affective, and social benefits aiding the professionalization of early career academics. Despite these findings, little research has investigated how retreats might aid undergraduate students, who also face challenges and anxieties in their early encounters with academic writing. This paper introduces the Undergraduate Writing Retreat (UWR), an instructor-facilitated and peer-led program that facilitates group writing for undergraduate students. In adapting the purpose of writing retreats from professional productivity to pedagogy, we demonstrate that the benefits associated with academic writing retreats translate to gains in writing self-efficacy and academic wellbeing among undergraduate students. Drawing from quantitative and qualitative data among students in a large introductory lecture course, we show that students participating in a single 90-minute UWR (n=85) expressed greater writing confidence, lower levels of stress and anxiety, and an increased willingness to share their work with peers relative to a control group (n=95). Qualitative feedback gathered from UWR participants reveals the mechanisms by which this modest pedagogical intervention delivered significant benefits to students.

KEYWORDS

academic writing, writing pedagogy, postsecondary education, group writing, mixed methods research

INTRODUCTION

Academic writing retreats (AWR) have become a staple of early career development for researchers and writers in higher education. AWRs offer dedicated time, protected space, and peer accountability for writing tasks (Beasy et al. 2020; Kent, Berry, Budds, Skipper, and Williams 2017; Murray 2015; Tremblay-Wragg, Chartier Labonté-Lemoyne, Déri, and Gadbois 2021). Research shows these formal features yield cognitive, affective, and social benefits; they help writers develop time management strategies (MacLeod, Steckley, and Murray 2012; Murray and Newton 2009), increase motivation (Moore 2003), reduce publication anxieties (Eardley, Banister, and Fletcher 2021), and

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exchange feedback and strategies with their peers (Aitchison and Lee 2006; Lee and Boud 2003; Wegener, Meier, and Ingerslev 2016).

As AWRs are frequently organized for professional development (Kornhaber, Cross, Betihavas, and Bridgman 2016) empirical research has focused on benefits to faculty members and graduate students. However, undergraduate students learning to write for an academic audience experience many of the same challenges as their professional peers (Goldschmidt 2014). Undergraduate students also struggle to set aside time and space to write (Cunningham 2022; Sangster 2023) and to find motivation to complete tasks (Ling, Elliot, Burstein, McCaffrey, MacArthur, and Holtzman 2021). They also experience unique challenges related to adapting to a new learning environment (Sotardi 2022), adopting a new style of writing (Walkington and Ommering 2022), and experiencing grade pressure (Boman, Lindsay, Bernier, and Boyce 2025; Fischman and Gardner 2022, 178–89). Undergraduate writers frequently struggle with feelings of isolation and alienation when engaging in the solitary work of academic writing (French 2018; Hegbloom, Ramsey, Glen, Sabinin, Litvin, and Veisz 2017), which can adversely affect academic wellbeing (Macakova and Wood 2022; Sotardi 2022; Young, Macinnes, Jarden, and Colla 2022). Thus, this population of emerging academic writers faces conventional and particular challenges to successful writing in higher education. The cognitive, affective, and social benefits derived from writing retreats may help overcome these obstacles.

This paper introduces the Undergraduate Writing Retreat (UWR), a course-embedded, instructor-facilitated, and peer-led program in group writing. Unlike professional retreats focused on productivity (Kent et al. 2017; Kornhaber et al. 2016), we show that assignment-based writing interventions structured around dedicated time, protected space, and peer participation can serve a pedagogical purpose, offering many of the same cognitive, affective, and social benefits associated with AWRs while also developing the academic writing skills suited to undergraduate student success. In repurposing writing retreats from professional productivity to pedagogy, we assess two variables—writing self-efficacy (WSE) and academic wellbeing (AWB) —that capture the cognitive, affective, and social benefits associated with professional AWRs for variables used in the undergraduate skills and wellbeing literatures. Using a retrospective pre/post survey, we find that students participating in a single, 90-minute UWR (n=85) improved both their WSE and their AWB relative to a control group (n=95). Qualitative feedback gathered from free-text responses reveals how this modest intervention delivered benefits to participating students.

ACADEMIC WRITING RETREATS: COGNITIVE, AFFECTIVE, AND SOCIAL BENEFITS AND PROFESSIONAL DEVELOPMENT

Academic writing retreats serve various purposes, from faculty development (Grant and Knowles 2000) to mock peer review (Aitchison et al. 2006; Wegener et al. 2016; Young et al. 2022). Retreats also vary in duration, whether concentrated across several days, with standing sessions scheduled, or on an ad hoc basis. Involvement can be fixed or floating as participants move from one project to another. Despite this flexibility of purpose and differences in duration and involvement, AWRs observe a similar format, prioritizing dedicated time and protected space among a gathering of colleagues or peers (Beasy et al. 2020; Kent et al. 2017). Setting aside time and space—what Murray (2015, 60) calls “spacing and pacing”—accomplishes more than just allocating resources. In their purposeful organization, retreats constitute structured events, offering “a break from daily routine” in a location “away from regular life interference” (Tremblay-Wragg et al. 2021, 99). AWRs, therefore, are not only organized in distant destinations; they are more commonly held on or near campus. Bound

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by a common purpose, participants in AWRs "create opportunities for the exchange of shared writing experiences" (Moore 2003, 335) in "an atmosphere of trust and safety that would allow (but not coerce) talk about writing fears and self-doubts" (Grant et al. 2000, 11).

Research shows this formal structure (dedicated time, protected space, goal-oriented peers) promotes productivity and efficiency in writing, improving outputs like academic publications or meeting benchmarks toward completing advanced degrees. Underlying this progress on written products, however, are the cognitive, affective, and social benefits that enhance participants' writing skills, confidence, and accountability. In a meta-analysis of empirical research on AWRs, Kornhaber et al. (2016, 1222) found successful retreats include strategies that enhance writing practices. AWRs foster a "writing pedagogy" that builds cognitive skills, like goal-setting (Kornhaber et al. 2016) and time management (Murray and Newton 2009). The retreat's limited timeframe encourages containment strategies, as writers learn to separate primary tasks achievable with current resources from secondary tasks that distract attention and slow progress (MacLeod et al. 2012, 643). These skills extend beyond the retreat; in a longitudinal study, Murray et al. (2009, 547) found that AWR participants "adopted a more disciplined and planned approach to academic writing" even after returning to the isolation of their desks. Strengthening discipline also helps writers overcome cognitive barriers to getting started and provides strategies to persist through setbacks. Papen and Theriault (2018, 177) found that AWR participants experienced improvements in their "ability to overcome a blank screen or to keep on writing even when feeling tired."

Cognitive skills are closely associated with writing in higher education, but a growing body of scholarship emphasizes success in academic writing also depends upon affective processes (Sword, Sorrenson, and Ballard 2020). Writers frequently confront anxieties about deadlines (MacLeod et al. 2012), frustrations over setbacks, and self-doubt regarding competence (French 2018). The self-directed and solitary practice of academic writing makes the workspace "a site of frustration, anxiety and fear" (Heron, Gravett, and Yakovchuk 2021, 538), negative emotions that are quite unhelpfully associated with poorer academic performance (Pekrun, Goetz, Perry, Kramer, Hochstadt, and Molfenter 2004). Because negative affect can compound writing challenges, AWR research has placed great emphasis on how group writing can not only contain or divert negative affect (MacLeod et al. 2012, 645) but produce positive emotions (Sword et al. 2020). Beasy et al., (2020, 1101) found "the use of a communal space where participants could see others in similar positions as them" replaced the isolation and drudgery of unstructured writing with a sense of "shared hardship" that "reduc[ed] the sense of anxiety around writing." Easing stress through shared experience promotes "finding kinship, support and fun in sharing the struggle to write" (Grant et al. 2000, 12). These positive emotions motivate, rather than enervate, writing progress and extend "beyond the traditional focus on increased productivity" by contributing to participants' overall wellbeing (Eardley et al. 2021, 192). Social interaction is central to AWRs. Often, retreats dedicate time for unstructured talk unrelated to the writing process (Grant et al. 2000). These short social intervals provide a cognitive break while strengthening the relationships—even among new acquaintances—that underlie the accountability mechanism of group-based writing. Participants also interact as colleagues, lending professional expertise and sympathy (Wegener et al. 2016). Many AWRs include informal "peer review" sessions in which participants share and respond to one another's work (Papen et al. 2018; Wegener et al. 2016; Woodhouse and Wood 2022). Several studies have noted that reproducing the critical function of peer review within "dialogic spaces" (Woodhouse et al. 2022) produces attitudes of mutuality and trust that constitute "horizontal" rather than "vertical" relationships (Aitchison et al. 2006; Lee et al. 2003). This

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moves writing from performativity to what Murray and Thow (2014) call "peer-formativity," the social process by which individuals learn to express writing that reflects their voices and values.

This social dimension, in turn, contributes to the cognitive and affective benefits. In a review of successful AWRs, Murray (2015, 55) found "discussing writing plans, aspirations and motivations" helped participants determine what is worth pursuing substantively and what can be accomplished realistically in the available time, while "conversations with others who write" allowed for "reflecting on, critiquing, and integrating new knowledge" that contributes directly to the written product. These cognitive, affective, and social benefits of participating in structured AWRs are neither isolated nor aggregative; they are mutually reinforcing skills that provide durable contributions to writing overall. We contend that these same benefits could serve non-professional academic writers, as well, and contribute not only to professional productivity but to pedagogy: helping undergraduate students to develop core competencies and improve academic wellbeing.

FROM PROFESSIONAL PRODUCTIVITY TO PEDAGOGY: ADAPTING THE COGNITIVE, AFFECTIVE, AND SOCIAL BENEFITS OF WRITING RETREATS TO SERVE UNDERGRADUATE WRITERS

Professional academics derive cognitive, affective, and social benefits from writing retreats, but they are not the only writers who experience composition challenges. Undergraduate students learning academic writing experience many of the same concerns that draw academics to writing retreats, such as resource allocation, anxiety about competence, and social isolation (Cunningham 2022; Sangster 2023). However, undergraduates face additional obstacles related to their initiation as post-secondary students who are encountering academic writing for the first time (French 2018; Goldschmidt 2014; Hegbloom et al. 2017). Significant performance pressures of their own often accompany external barriers as well (Fischman and Gardner 2022, 178–189; Boman et al. 2025). Increasingly, undergraduates experience isolation and alienation, negatively impacting their academic performance (Loes 2022; Sotardi 2022). Students often believe they are alone in these challenges, assuming their peers are more competent and confident in core academic skills (Macakova et al. 2022). The solitary practice of academic composition can exacerbate this self-belief deficit and contribute to diminished mental health and wellbeing (Walkington and Ommering 2022; Young et al. 2022).

Repurposing writing retreats from professional productivity to pedagogy requires careful attention to how the cognitive, social, and affective benefits of AWRs may apply to undergraduate learning outcomes. Learning academic writing is a process of identity formation, as one comes to see oneself as a scholarly writer. If "scholarly writing and identity formation are woven into each other" (Wegener et al. 2016, 1093) we need to recognize the skill development (cognitive practices) and confidence-building (affective processes) by which undergraduate students come to envision themselves as academic writers. Previous research on writing self-efficacy further explores these processes. Bruning, Dempsey, Kauffman, McKim, and Zumbrunn (2013, 28) stress that "writing is a complex cognitive act generating high demands on working memory" that functions largely through "ideation," or "writers' beliefs about their abilities to generate ideas." Empirical work on undergraduate writers corroborates this framework. Hegbloom et al. (2017, 3) found that "an especially relevant aspect of students' cognitions and emotions is their self-efficacy beliefs, judgments of their own ability to perform specific tasks." Similarly, Duchatelet and Donche (2019) demonstrate that motivation to engage in writing tasks—a key benefit found in AWRs (Moore 2003)—is a major predictor in developing writing self-efficacy.

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In recent years, researchers have conducted more studies on the wellbeing of undergraduate students, investigating campuses as sites of anxiety, performance pressure, and social isolation (Boman et al. 2025; Macakova et al. 2022; Sotardi 2022; Young et al. 2022). Studies indicate that academic writing is particularly taxing mentally and emotionally, involving high concentrations of anxiety (French 2018; Hegbloom et al. 2017). These affective stressors feed into, and are compounded by, social deficits on campus, as students come to believe they are alone in encountering obstacles while their peers write with relative ease (Woodhouse et al. 2022).

These findings suggest that social isolation contributes to affective challenges that make writing unpleasurable. Writing progresses more smoothly when writers imbue the process with intentionality, setting positive goals and affirming a sense of pleasure and identity (Papen et al. 2018). Cohesion and positive affect support goal creation, whereas feelings of institutional belonging foster identity (Sotardi 2022), authenticity (Walkington and Ommering 2022), and academic wellbeing (Eardley et al. 2021; Stevenson 2021). These mental health benefits are intrinsic goods; they are also associated with better academic performance (Sotardi 2022; Walkington and Ommering 2022). Despite these cognitive, affective, and social challenges, few studies explore writing retreats as pedagogical interventions to strengthen composition skills, reduce anxiety, and facilitate peer support. Cunningham (2022) and Sangster (2023) introduced retreats into undergraduate pedagogy, providing structured group writing to advanced undergraduate students. These interventions produced several expected benefits, such as "increased confidence, enhanced motivation and a more pleasurable final write-up stage" (Sangster 2023, 251) and "increased productivity, increased sense of support, an ability to protect time and space for writing (both in and out of retreat), and an increased capacity to set goals effectively" (Cunningham 2022, 1431). Although these studies did not address academic wellbeing, they suggested that some AWR benefits translate to undergraduate writers. We expand on these findings by investigating how UWRs, embedded in a large introductory course, can enhance students' writing self-efficacy and academic wellbeing.

THE UNDERGRADUATE WRITING RETREAT: DESIGN AND PURPOSE

We developed the Undergraduate Writing Retreat (UWR) to bring the cognitive, affective, and social benefits of structured group writing to undergraduate students in a large, team-based introductory lecture course at a major Canadian research university. Unlike standard academic writing retreats, we embedded the UWR within a disciplinary course and oriented it toward a specific writing assignment, while still incorporating formal characteristics of successful group writing: protected time, dedicated space, and peer support.

UWRs share some formal characteristics and instructional purposes with many interventions offered at many postsecondary institutions' writing centers (Mackiewicz and Thompson 2018).[1] Just as our UWR structures a dedicated time and protected space outside of the classroom, writing centers and facilitated workshops can act as "liminal spaces" where students can encounter writing tasks from fresh perspectives (Jusslin and Widlund 2024; Salesses 2021; see also Sunstein 1998). Furthermore, collaborative learning is foundational to the purpose of writing centers (Ede 1989), and scholars have also established the link between social writing and aspects of writing self-efficacy, such as motivation (DeCheck 2012) and demonstrated how student attendance at writing centers can advance course-specific learning outcomes (Dansereau, Carmichael, and Hotson 2020; Wood, Roggenbuck, Doerschler, and Hicks 2018). More recently, writing center interventions have also shown adaptability to online settings (Ard and Ard 2019).

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Other scholarship on university writing support explores writing center resources that can be incorporated directly into classrooms, whether through writing fellowship programs (Haring-Smith 1992) or embedded tutors (Spigelman and Grobman 2005), Like our UWRs, these initiatives benefit from additional support tailored to course- and assignment-specific writing tasks. Although many interventions in this mold involve relatively short, one-on-one tutoring sessions (e.g. Crawford, Rajabally, and Yen 2025; Kurzer, Hayden, and Nguyen 2023), embedded tutors can facilitate group writing workshops as well (Titus, Scudder, Boyle, and Audol 2014).

The breadth and diversity of writing interventions—both those in writing centers and those incorporated into the classroom—are well-suited to the distinct demands of academic writing across the disciplines (Mackiewicz et al. 2018; Salesses 2021). We situate our intervention as a writing retreat because it embodies what we identify as the three formal features common to AWRs: the dedicated time and protected space that signify retreats as events distinct from everyday course proceedings (Tremblay-Wragg et al. 2021), and peer support in which students share strategies and insecurities related to writing (Wegener et al. 2016). In this sense, it is important to the design and purpose of retreats that they are organized outside of class time and do not involve active tutoring by the instructional team (see below); rather, students engage in horizontal, "peer-formative" relationships with their classmates (Aitchison et al. 2006; Lee et al. 2003; Murray et al. 2014). In reproducing these formal elements, the structure and purpose of AWRs could be implemented in an undergraduate course and that their cognitive, social, and affective benefits could be useful for pedagogical purposes, strengthening students' writing self-efficacy and academic wellbeing.

We recruited volunteers from a large lecture course (enrollment 404), where most students engage in academic writing for the first time.[2] UWR sessions took place online using Zoom. Unlike informal student gatherings in libraries, residences, or cafes, only students seeking structured group writing entered the breakout rooms organized for the retreats. Further, UWRs observed a fixed schedule divided into task-specific periods, allowing students to select sessions aligned with their writing needs and enter groups with peers pursuing similar goals. These structural components recreate virtually the essential features of AWRs, preserving "spacing and pacing" (Murray 2015, 60) and assembling goal-oriented students for real-time, responsive social engagement (Aitchison et al. 2006; Lee et al. 2003). This format guided students through writing stages, supported time management, and structured task flow so it integrated peer feedback (see Table 1 for a breakdown of timed tasks and their pedagogical benefits).

UWR sessions begin with a brief introduction by a teaching team facilitator. A greeting among students—many of whom, in a large class, are strangers—helps establish a nonhierarchical and low-pressure tone (Lee et al. 2003) and reduces anxiety common among undergraduate writers (French 2018; Hegbloom et al. 2017). Students are encouraged to share writing challenges and helpful strategies in the Zoom chat, prompting a facilitator-led discussion to make students feel less alone in their struggles and more inclined to share in smaller groups. Students then enter breakout rooms for 30 minutes to discuss facilitator prompts, share assignment ideas, and ask clarifying questions. This interactive period leverages the social benefit of writing retreats toward the affective and cognitive skills involved in productive writing—what Wegener et al. (2016) called "borrowing brainpower and sharing insecurities." Afterward, students rejoin the main room for 30 minutes of independent writing with cameras and mics muted. This transition from social sharing to independent writing helps students act on freshly discussed ideas, riding the wave of goodwill that comes from experiencing common emotions to overcoming the dreaded blank screen (Papen et al. 2018). Passive group presence on Zoom reinforces social accountability and encourages progress. In the final 10 minutes,

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students share writing accomplishments and ask questions. At this phase, many report feeling more confident about the assignment and clearer on their next steps.

Table 1. Structure and hypothesized benefits of the Undergraduate Writing Retreat

UWR stage	Time	Activity	Benefit type
Instructor-facilitated introduction	20 min	Greeting participants Discussing common writing challenges Providing strategies for overcoming them	Social Affective-cognitive Cognitive
Small-group breakout rooms	30 min	Sharing assignment ideas Providing peer feedback and suggestions	Social-affective Social-cognitive
Independent writing time	30 min	Sustaining group motivation to solo tasks Incorporating peer feedback Breaking the blank-page barrier	Social-affective Social-cognitive Cognitive
Final debrief	10 min	Sharing accomplishments Discussing next steps	Social-affective Social-cognitive

MEASURING UWR EFFECTIVENESS: DATA AND METHODS

We collected data from an introductory lecture during the winter 2022 semester. Our sample includes 180 students who completed all quantitative survey responses, yielding a 44.6% response rate. As both dependent variables—writing self-efficacy and academic wellbeing—involve subjective self-assessment, a self-diagnostic test is appropriate. We employed a retrospective post-test designed to capture perceived changes in a single administration (Little et al. 2020). This design minimizes the study's role in the intervention and maximizes time for activities with hypothesized benefits. It also reduces response shift bias, where students may initially overestimate their WSE and AWB, only to realize their skills are closer to average (Moore and Tananis 2019).

Table 2 provides the conceptual schema guiding our question selection, adapting the cognitive, affective, and social benefits of professional writing retreats to the pedagogical and health measures of writing self-efficacy and academic wellbeing. To measure WSE, we adapted questions and assessment scales from Mitchell, McMillan, Lobchuk, Nickel, Rabbani, and Li (2021, 8–9) and Meza and González (2020, 11–17). For AWB, we adapted instruments from Eardley et al. (2021) and Stevenson (2021). Although our analysis treats these variables independently, recent scholarship suggests social writing practices, like peer review, might enhance WSE (Bürgermeister, Glogger-Frey, and Saalbach 2021). Additionally, improved student mental health is linked to increased academic performance (Macakova et al. 2022; Sotardi 2022). As demonstrated in the results below, WSE and AWB are mutually reinforcing yet possess distinct capacities that vary across undergraduate populations. The schema thus separates these processes for statistical analysis.

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Table 2. Survey questions translating AWR benefits to undergraduate academic skills

Writing self-efficacy questions		Academic wellbeing questions
Cognitive benefits	**Affective benefits**	**Social benefits**
• I can find ways to overcome difficulties with writing. • I can make appropriate connections in my writing between course concepts and my chosen research article. • I can recognize when my writing goes off track from what the assignment is asking for, and I can get back on track.	• I can comfortably express concepts, language, and values from the course in my writing assignments. • I feel prepared for the challenges of writing at the university level. • I feel like the challenges with writing that I experience are unique to me. • I find it stressful thinking about this assignment.	• I am hesitant to seek help on my assignments. • I feel comfortable receiving feedback on my writing from my peers. • I feel comfortable giving feedback to my peers on their writing ideas.

Our quantitative survey measures potential increases to our two dependent variables. However, these data alone do not reveal the mechanisms behind such changes. To explore how participants interpreted the intervention and why their self-assessments shifted, we included three free-text response questions that allow students to narrate their experiences in their own words (Singer and Couper 2017). Unlike the "closed" self-assessments of the quantitative items, these open-ended questions encouraged thoughtful and reflexive engagement.

Although qualitative research on AWRs often employs interviews (Eardley et al. 2021; MacLeod et al. 2012) or autoethnographic field notes (Beasy et al. 2020; Wegener et al. 2016), implementing a writing intervention within an undergraduate course presented ethical obligations that guided our methodological approach. Because of our "dual role" as instructors and researchers, we prioritized participant anonymity so that students would neither feel compelled to participate nor bias responses to perceived expectations (Ferguson, Yonge, and Myrick 2004). The survey approach allowed students to consent or decline without disclosing identifying information. Free-text responses provided distinct methodological advantages over interviews, including immediate post-intervention feedback at a scale accommodating a large survey study (Singer et al. 2017).

Dependent variables

We first constructed composite scales for the two dependent variables. We measured all questions on a 5-point Likert scale, producing continuous measures.[3] An Exploratory Factor Analysis (EFA) confirmed the presence of two latent constructs in the pre-treatment questions, validating the combination of survey questions into two distinct scales (Segars 1997). The EFA inductively relied on the data's internal correlation structure to assess which questions belong to a shared scale. We used iterated principle axis factoring estimation with a two-factor solution with oblique (promax) rotation (see full presentation in Appendix I).

The EFA supported combining five items into the WSE scale and four into the AWB scale. The survey item "I feel like the challenges with writing that I experience are unique to me." did not load onto either factor, so we excluded it. Table 3 presents the retained nine items and their factor pattern coefficients.

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Table 3. EFA two-factor solution results

	PA1(WSE)	PA2(AWB)
I can find ways to overcome difficulties with writing.	**0.72**	-0.12
I can make appropriate connections in my writing between course concepts and my chosen research article.	**0.65**	-0.03
I can recognize when my writing goes off track from what the assignment is asking for, and I can get back on track.	**0.43**	0.00
I can comfortably express concepts, language, and values from the course in my written assignments.	**0.72**	0.01
I feel prepared for the challenges of writing at the university level.	**0.47**	0.23
I feel comfortable receiving feedback on my writing from my peers.	-0.18	**0.77**
I feel comfortable giving feedback to my peers on their writing ideas.	0.00	**0.57**
I find it stressful thinking about this assignment (reversed).	0.14	**0.38**
I am hesitant to seek help on my assignments (reversed).	0.03	**0.50**
Correlation of scores and factors	0.88	0.84
Factors' correlation coefficient	0.53	
RMSR	0.05	

With this factor pattern (see Appendix I for fit discussion), we constructed composite variables to match this item-factor structure. We created WSE and AWB scales by averaging students' Likert-scale responses for each construct. A score of five indicates the highest possible WSE or AWB.

Next, we assessed scale reliability. Although Cronbach's alpha is widely used, it often underestimates reliability, especially with few items (e.g. Sijtsma 2009). We instead used the Greatest Lower Bound (GLB), considered one of the most accurate reliability estimators (Berge and Sočan 2004), which is calculated using glb.algebraic from R's psych package (Revelle 2015). We also reported the omega coefficient (ωt), which reduces bias in smaller samples (Revelle 2025; Revelle and Zinbarg 2009).

Table 4 presents reliability estimates for the WSE and AWB scales using pre-treatment data. Both GLB and ωt show strong reliability. We also reported Cronbach's alpha, though it tends to underestimate reliability for low-item scales (especially relevant for AWB, which has four items). While the conservative 0.7 threshold is common, values above 0.58 are still considered acceptable (Taber 2018). GLB and ωt converge above 0.7 for both scales.

Table 4. Reliability estimates for WSE and AWB scales

	Cronbach's alpha	GLB	Omega total (ω_t)
WSE (pre)	0.74	0.77	0.77
AWB (pre)	0.63	0.71	0.71

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Analytical approach

In addition to our sample of UWR participants (n=85), we collected data on students who elected not to participate in the intervention (n=95) for several reasons. While the retrospective post-test design captures self-assessed changes in our dependent variables, it may be vulnerable to demand biases: students having completed a pedagogical intervention may expect improvement and will respond accordingly. Although qualitative analysis of free-text responses helps check for this bias, a control group offers additional advantages, including the ability to compare changes in WSE and AWB between participants and non-participants.

To implement a comparable retrospective post-test for this control group, we identified an appropriate intermediary condition: administering the survey after students submitted their essays but before receiving grades. This conservative approach likely underestimates the intervention's effects. Any greater improvement in WSE or AWB among UWR participants, relative to the control group, would suggest that the intervention strengthens these outcomes even more than the completion of the assignment.

We also included a control group to determine whether students who sought group writing opportunities differed meaningfully from those who did not. There are reasons to believe this would be the case. Given WSE measures confidence in completing writing tasks, we would expect UWR participants to report lower initial WSE than non-participants. Conversely, because AWB measures comfort with providing and receiving peer feedback, we would expect higher AWB among UWR participants, as reticence to share academic work might deter others from attending.

We utilized ordinary least squares (OLS) regression in the main models to estimate the effect of UWR participation on writing self-efficacy and academic wellbeing. We included four diagnostic control variables, reflecting participants' prior academic writing experience—relevant to both the intervention's goals and potential confounders. We also adjusted for students' self-reported pre-assignment AWB and WSE, resulting in six control variables in the final model.

For further robustness, we ran a Difference-in-Difference (DiD) model to estimate the treatment effect of UWR participation on WSE and AWB. This approach relies on an OLS framework, adding an interaction term to isolate the effect of UWR from other post-assignment changes. DiD is a widely used approach for causal inference in non-randomized settings, as it mitigates self-selection bias and improves accuracy over standard OLS models that hold pre-treatment values constant (Lechner 2011). It estimates the additional change attributable to the UWR, distinguished from a general post-assignment difference for the treated group. We reported the DiD results in the findings section, with the regression table in Appendix II.

Additionally, we included four diagnostic variables aligned with the study's goals. Because we introduced the UWR as a tool for developing writing skills among new academic writers, we measured participants' university tenure and prior experience with academic writing: students' year at university, the number of writing assignments they have completed at university so far, their prior (in)experience reading peer reviewed research articles, and their (non)attendance at assignment-specific office hours. These variables also serve an analytical function as control variables that may confound the relationship between UWR participation and post-assignment AWB and WSE. We also adjusted for students' pre-assignment AWB and WSE to account for baseline differences. In total, we included six control variables in our regression model. Table 5 summarizes sample characteristics. Of the 85 students who attended a UWR and completed the survey, 36 responded to one or more of the three qualitative questions. These asked which aspects of the retreat were most beneficial, which needed improvement, and invited general feedback. We compiled responses and coded them using

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NVivo 12. Before coding, members of the research team independently read the responses, then met to discuss emergent themes. Open coding followed, guided by team discussion and inductive insights. Through axial coding, we grouped the resultant themes into subcategories aligned with UWR outcomes and relevant theory (Corbin and Strauss 2008).

FINDINGS

The results of our regression analyses demonstrate that participating in an undergraduate writing retreat produces positive benefits to students' writing self-efficacy and academic wellbeing. Table 5 provides our sample characteristics and a two-tailed t-test results for sample proportion and mean differences between UWR and no-UWR participation. Contrary to expectations, the two samples did not reveal statistically significant differences in students' level of experience with academic writing. Although, as can be expected in an introductory class, most students (76%) were in their first year at university, the proportion of first-year students in the UWR condition was nearly identical to that of the control group. Similarly, having little prior experience with academic writing or familiarity with peer-reviewed articles had no demonstrable effect on the decision to attend the UWR. However, students who attended a UWR were more likely to attend office hours related to the assignment, indicating that group writing interventions attracted more individuals seeking help on writing than their peers who did not seek out this opportunity.

Table 5. Sample characteristics

Variables	Total (n=180)	No UWR (n=95)	UWR (n=85)	No UWR-UWR Difference
Student characteristics				
First-year student, prop	0.76	0.75	0.78	-0.03
3+ assignments, prop	0.55	0.59	0.51	0.08
Peer review, prop	0.84	0.88	0.79	0.10
Office hours, prop	0.29	0.20	0.39	-0.19**
Pre-assignment scores				
Pre-AWB, mean	2.98	3.00	2.95	0.05
Pre-WSE, mean	3.42	3.55	3.28	0.27**
Note: *$p < 0.050$, **$p < 0.010$, ***$p < 0.001$				

UWR participants differed from the control group in other important ways. As expected, students who sought extracurricular assistance in writing reported lower levels of WSE prior to participating in the intervention than their peers group writing intervention. Because WSE consolidates measures of students' ability to overcome difficulties in writing and comfortably express themselves when discussing academic topics (Meza and González 2020; Mitchell et al. 2021), students reporting low scores on these self-assessments of cognitive and affective writing skills would seem to benefit the most from participating in structured group writing and thus have extra incentive to attend.

On the other hand, we would expect students reporting lower levels of initial AWB to be underrepresented in the treatment condition vis-à-vis the control group. AWB is a measure of

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students' self-assessed hesitation to seek our writing help and participate in peer feedback, as well as their feelings that such challenges are unique to them. Although such students may stand disproportionately to gain affective and social benefits from participating in a UWR, lower levels of AWB are associated with decreased feelings of institutional belonging (Sotardi 2022), which would suggest a lower likelihood of participating in voluntary activities that require engagement in unfamiliar or uncomfortable tasks. Contrary to this expectation, we found no statistical difference in initial AWB between students who attended the UWR and those who did not. Furthermore, self-reported AWB scores were meaningfully lower than WSE scores for both samples. These findings suggest a deficit in academic wellbeing among undergraduate students and a corresponding urgency in knowing how pedagogical interventions may improve the affective and social elements of academic writing.

Results from regression analyses

UWR participants had similar levels of university tenure and experience with academic research, writing, and peer review as students in the control group. Participating students came in with lower levels of confidence in writing than peers, but equally low levels of academic wellbeing. How did their self-assessments of writing self-efficacy and academic wellbeing change after having participated in structured group writing? Did the UWR deliver the same cognitive, affective, and social benefits shown to accompany participation in group writing retreats among professional academics?

Table 6. OLS regression for post-treatment WSE and AWB

	Post-WSE	**Post-AWB**
UWR participation	0.307***	0.466***
Student characteristics		
First-year student	0.066	0.079
3+ assignments	-0.030	0.099
Peer review	0.171	-0.000
Office hours	0.083	-0.057
Pre-assignment scores		
Pre-AWB	0.034	0.611***
Pre-WSE	0.432***	-0.069
Adjusted R^2	0.237	0.494
Note: *$p < 0.050$, **$p < 0.010$, ***$p < 0.001$		

Table 6 presents the results from the OLS regression analyses for our two dependent variables: post-treatment WSE and AWB. The first row shows the coefficients for our explanatory variable of interest: UWR Participation. The coefficients indicate that, on average, compared to students who did not participate in the UWR, students who did participate reported approximately 0.3 points higher on their post-assignment WSE. This increase is especially significant because the control group measures students' WSE after having completed and submitted their essay, while the treatment

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group measures participants' WSE after the writing retreat but before completing the assignment. Joining fellow students in structured group writing—sharing ideas and feedback with peers before applying these benefits toward individual writing time—is more associated with increased writing self-efficacy than is actually finishing the paper.[4] These results were statistically significant at $p<0.001$.

The effects of participating in the UWR on AWB were even more pronounced than the gains to WSE. Participating students experienced greater than 0.5 points improvement to their scores compared with the control group. As reported above, students entering a UWR had similarly low levels of AWB to students who declined to join a session. However, UWR participants formed social and affective connections that their peers did not; discussing the obstacles to academic writing decreased students' beliefs that they confronted these challenges alone. They left the session with higher reported levels of comfort in giving and receiving peer feedback than students in the control group. The differences observed in these two samples confirm a distinct advantage to participating in the UWR, one that is conferred regardless of the student's year in university, experience with academic writing, or familiarity with peer-reviewed academic research. Whereas students in the control group could be expected to report increased confidence and writing skills after successfully completing the assignment, the social and affective benefits unique to writing in structured group settings could not be reliably produced in the solitary environment in which university essay writing typically takes place. As with WSE, these gains in AWB were also highly significant statistically, at $p<0.001$.

Similarly, the Difference-in-Difference modelling (see Appendix II) suggests a significant UWR treatment effect. The estimated increases in WSE and AWB attributable to the writing retreat are greater in these models, respectively 0.464 and 0.489 on the five-point scales, holding the same control variables constant. These models have much higher fit measures (adjusted R^2 of 0.63 and 0.75 respectively), which further strengthens the robustness of the positive UWR effect.

Qualitative survey results

Our OLS regression and DiD analyses confirmed that the cognitive, affective, and social benefits of writing retreats for professional academics contribute to gains in writing self-efficacy and academic wellbeing among undergraduates as well. We validate and explain these findings with free-text responses from students attending a UWR. Understanding how UWRs deliver these benefits highlights the intervention's formal elements and helps instructors tailor its design to specific course and assignment purposes. Students cited benefits from collaboration, recognized shared struggles, and appreciated having structured time to write. As one student shared:

> [Prior to the UWR] it was difficult for me to find a link between the research [article] and the course concepts. However, by sharing my ideas aloud and discussing with peers, they were able to make useful suggestions on what concepts, readings, and lectures I could apply or incorporate in my essay. Now, I feel that I have a clearer view on what I can discuss in my essay and how I can frame my ideas. I was additionally able to make more sense of my ideas by simply sharing them with others. This entire process was very beneficial to my writing and my overall understanding of the assignment.

This student describes several challenges related to writing that reflect cognitive skills central to the learning outcomes of undergraduate writing assignments, such as linking research and concepts, making sense of ideas, and framing an argument. Notably, this student explicitly attributed the social benefits of the UWR ("sharing my ideas aloud and discussing with peers") to their ability to

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clear the cognitive hurdles to successful academic writing ("I was additionally able to make more sense of my ideas" and "was very beneficial to…my overall understanding of the assignment"). Many other student comments echoed the overlapping of social and cognitive benefits. Students engaged in what Wegener et al. (2016) call "borrowing brainpower and sharing insecurities." They expressed benefits from both acts in reciprocal exchange—vocalizing their own thoughts and attentive listening to others—which translated into writing strategies that could be put immediately into practice. For one student, "talking about your essay ideas out loud helped with gauging my essay instead of keeping it within my head" whereas another noted "it benefited me hearing other students also recount their struggles with the writing process and the stage they are at in their essay. It made me feel less alone."

In another account, a student described how the UWR aided them in overcoming the dreaded blank page, which is also noted among scholars on professional writing retreats (Papen et al. 2018; Wegener et al. 2016):

> At first, I was having difficulties starting my essay even though I had [completed] the introduction, but after the retreat and going into independent time, I was able to work on the essay and felt like a weight came over me. Furthermore, it reinforced my understanding of the assignment and the main point of my essay.

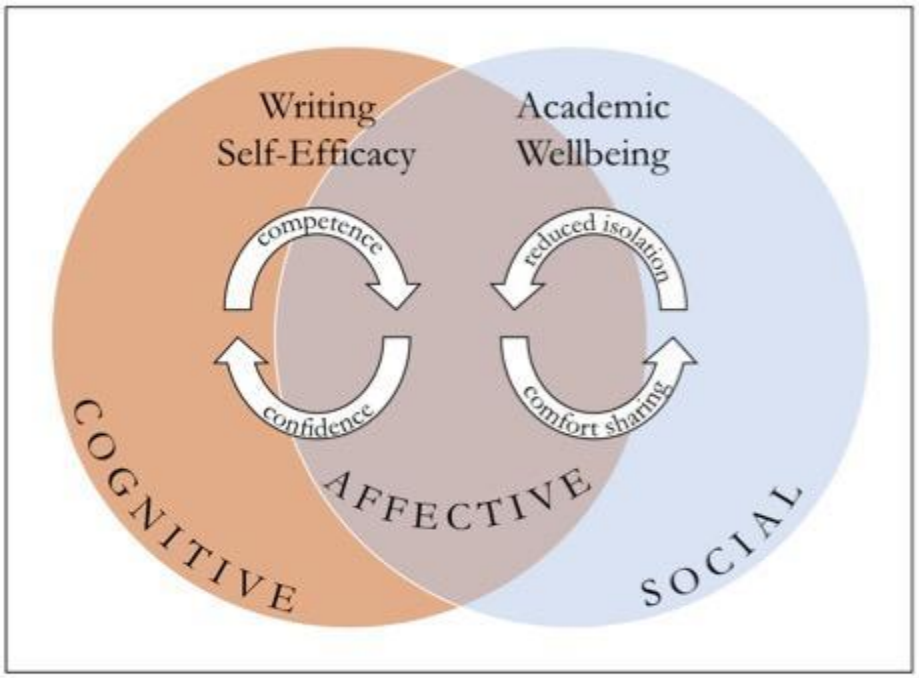
The formal features of UWRs—what Murray (2015, 60) referred to as the "spacing and pacing" of writing retreats—helped students cross a threshold in their writing, moving from one task to another. Here, the student described how the "independent time" protected by the UWR contributed not only to a cognitive benefit related to their writing ability but also yielded affective wellbeing dividends ("a weight came over me") related to surmounting challenges posed by university writing. As another student expressed, "the aspect of being able to get feedback from peers and then having time to work on what your peers recommended along with getting the drive to move forward and work on the essay itself was most beneficial to me."

These comments suggest that the overlapping benefits of participating in a UWR are also mutually reinforcing, as gains in one learning domain create pathways to increase in another. Just as writing self-efficacy describes a strengthening of skills in confidence, with gains in competence and academic wellbeing links institutional belonging to increased initiative, students reveal how the UWR structures group writing to produce a virtuous cycle of benefits (see Figure 1). As one student expressed, "the aspect of being able to get feedback from peers and then having time to work on what your peers recommended along with getting the drive to move forward and work on the essay itself was most beneficial to me."

Undergraduate students further credited the UWR with "allowing me to step outside my comfort zone" and "realizing that you're not the only one in a predicament." As one student reflected: "Since I do not know many people at school, the breakout rooms were extremely helpful. I found out I was not the only one stressing and that me and other classmates had similar struggles we solved together." Other students emphasized that having a structured opportunity to meet with students about academic life made the exercise "very relatable" and "provide[d] a bit of perspective."

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Figure 1. Mechanisms of mutual reinforcement to writing self-efficacy and academic wellbeing



CONCLUSION

Undergraduate writers experience many of the same challenges as their professors, including struggles with time management, anxiety about deadlines, and motivation to make progress on written work. Despite a recent growth in scholarship on writing retreats for professional development in higher education, research has largely ignored the benefits of group-based writing for undergraduates. This paper investigates whether the cognitive, affective, and social benefits associated with academic writing retreats are replicable among undergraduate writers in a large introductory class. Using survey and free-text data gathered from students engaging in a course-embedded group writing intervention—what we call an Undergraduate Writing Retreat (UWR)—we measure changes in writing self-efficacy and academic wellbeing among participants versus a control group. Our quantitative data confirm significant gains to both measures, demonstrating that completing a UWR leads to larger increases in writing self-efficacy and academic wellbeing than submitting the completed assignment alone. Our qualitative findings indicate the pathways through which these benefits are accrued. By sharing challenges and strategies with peers, students feel reduced anxieties and social isolation. By growing in confidence, undergraduates feel better equipped to overcome common obstacles to making progress on written work. The formal structure of the UWR—protecting time and space for writing in an environment of peer accountability—produces mutually reinforcing cognitive, affective, and social benefits for early academic writers.

These findings suggest that even a modest, one-off group writing intervention can significantly improve learning outcomes and student academic wellbeing. Future research can build upon these findings to extend our understanding of how undergraduate writing retreats can contribute to student learning outcomes. Employing additional qualitative methods, such as interviews and focus groups, can add depth to our understanding of how undergraduate students experience writing retreats. Researchers may also implement UWRs in different educational contexts

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(across distinct disciplines of academic writing, in classes of various sizes, and at differing stages of instruction) to test for the generalizability of our findings. Future research may also investigate how the spatial and institutional setting of UWRs, such as organizing sessions in person or at campus writing centres, might impact student benefits.

Scholarship on writing retreats for professional academics may also continue to guide further implementations of UWRs and may address limitations in the design of our intervention. In particular, whereas Murray et al. (2009) collected longitudinal data to confirm lasting benefits of group writing, the current study is limited to real-time self-assessments of gains in writing self-efficacy and academic wellbeing. Similarly, although Cunningham (2022) and Nairn et al. (2015) show that sustained engagement in writing groups can lead to internal competition, other scholarship suggests that longstanding writing groups may develop writing skills (Aitchison et al. 2006) and mental health benefits (Young et al. 2022). Last, whereas our UWR focused on developing students' writing self-efficacy and academic wellbeing, future researchers may wish to explore whether structured group writing can contribute to other important outcomes, such as academic performance.

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NOTES

1. One of our co-authors offered tutorial office hours tailored to this assignment in our university's writing center, which we control for in our analysis (see below).
2. We issued a consent form (protocol no. 42332) to all recruits after the session had ended, allowing them to benefit from the intervention without having to contribute to the dataset. Furthermore, we offered a modest incentive of 3% bonus points on the assignment to students for completing the survey—regardless of whether they granted consent to include the data in our study or whether they were in the treatment or control conditions.
3. We hypothesize that participating in a UWR will lead to students' improvement on all elements of our two dependent variables. Because WSE and AWB are composite scales, it is important that this improvement is measured in a consistent direction. For this reason, we reversed the values of the negatively-worded questions (e.g., "I find it stressful thinking about this assignment,"), as indicated in Table 3.
4. As hypothesized, the control group also saw statistically significant increases in both WSE and AWB from having submitted their completed assignment. We ran two-tailed t-tests on their pre/post data to confirm an improvement of 0.26 on each variable.

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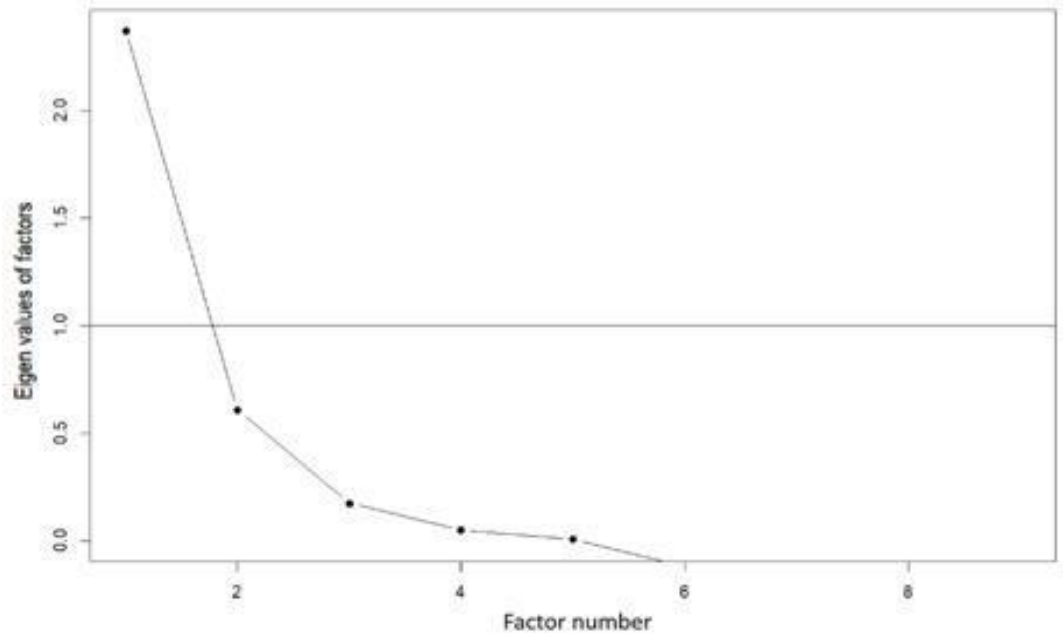
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APPENDIX I
EXPLORATORY FACTOR ANALYSIS

We first established the eligibility of the data for the EFA through the Kaiser-Meyer-Olkin (KMO) measure and the Bartlett test of sphericity. With an overall KMO of 0.8, a minimum item KMO of 0.69, and a significant test of sphericity (χ^2 (36) = 318, p < .001), the data is suitable for the EFA (Williams, Onsman, and Brown 2010). We then used a scree plot to ensure that the two-factor solution is appropriate for the data (Figure 2). The elbow at 3 supported the presence of two underlying constructs (two dimensions) capturing meaningful variation (Cattell 1966). Finally, we used oblique rotation as the two measures were not theorized to be uncorrelated.



After running the EFA, we evaluated model fit measures to ensure that the two-factor solution with items organized along the WSE and the AWB dimensions is suitable for subsequent scale building. The EFA overall (see Table 3) showed appropriate fit. The root mean square residual (RMSR) below 0.08 showed good fit (Hu and Bentler 1999). All items had factor pattern coefficients above 0.3 for their respective factor (and below 0.3 for the other factor). Most items were at or above 0.5, and almost all items were above 0.4 for their respective factor. The multiple R^2 of scores with their respective factors were 0.78 (for WSE) and 0.71 (for AWB). All together, these indicated that scales can be built following this factor structure (Henson and Roberts 2006).

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APPENDIX II
DIFFERENCES-IN-DIFFERENCE MODELS

	WSE	**AWB**
Post-assignment time	0.265***	0.255***
UWR group	-0.079	-0.011
Student characteristics		
First-year student	0.033	0.039
3+ assignments	-0.015	0.049
Peer review	0.086	-0.000
Office hours	0.042	-0.028
Pre-assignment scores		
Pre-AWB	0.017	0.806***
Pre-WSE	0.716***	-0.034
UWR* post-assignment	0.464***	0.489***
Adjusted R^2	0.628	0.750
Note: *$p < 0.050$, **$p < 0.010$, ***$p < 0.001$		

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