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# An Exploration of Writing Self-Efficacy and Writing Self-Regulatory Behaviours in Undergraduate Writing

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# An Exploration of Writing Self-Efficacy and Writing Self-Regulatory Behaviours in Undergraduate Writing

**Abstract**
Students will take independent action to improve their writing when they believe those actions will have a positive effect. The data presented focuses on the self-regulatory writing behaviours of nursing students in their third year. The purpose was to explore patterns of writing self-efficacy, anxiety levels, and student grade point average (GPA) in relation to student choices with help seeking, advanced planning of writing, revision habits, and response to feedback. Low writing self-efficacy, high anxiety students sought help from more sources, reported their feedback made them feel negative about their capabilities as writers, and were less likely to report reading and applying feedback to future writing efforts. No patterns of writing self-efficacy or anxiety levels emerged with respect to student revision habits or their choice to begin their assignments in advance of the due date. GPA was also not associated with the writing self-regulatory choices assessed. As the primary writing support for students in the later years of a nursing program, educators should consider interventions that encourage help seeking, facilitate students' understanding and integration of the feedback they receive into their assignment revisions, and normalize the negative emotions that interfere with the self-efficacy levels required to write well.

Les étudiants vont prendre des mesures indépendantes afin d'améliorer leur écriture quand ils pensent que ces mesures vont avoir des résultats positifs. Les données présentées se concentrent sur les comportements d'auto-régulation d'étudiants de troisième année en sciences infirmières. L'objectif était d'explorer les tendances de l'auto-efficacité de l'écriture, les niveaux d'anxiété et la moyenne générale des étudiants par rapport aux choix des étudiants pour chercher à se faire aider, planifier l'écriture à l'avance, leurs habitudes de révision et la réponse au feedback. Les étudiants ayant une mauvaise auto-efficacité de l'écriture et qui étaient anxieux ont cherché à se faire aider auprès de davantage de sources, ils ont rapporté que leur feedback leur avait donné un sentiment négatif concernant leurs capacités en tant que rédacteurs et ils avaient moins tendance à rapporter leurs lectures et à appliquer le feedback reçu à leurs efforts futurs en rédaction. Aucune tendance d'auto-efficacité de l'écriture ou de niveaux d'anxiété ne sont apparus en ce qui concerne les habitudes de révision des étudiants ou leurs choix pour commencer leurs travaux à l'avance par rapport à la date où ceux-ci devaient être remis. La moyenne générale n'était également pas liée aux choix évalués d'auto-efficacité de l'écriture. En tant que soutien de rédaction principal des étudiants au cours des dernières années du programme de soins infirmiers, les éducateurs devraient envisager des interventions qui encouragent les étudiants à chercher de l'aide, à faciliter leur compréhension et l'intégration du feedback qu'ils reçoivent dans les révisions de leurs travaux, et à normaliser les émotions négatives qui perturbent les niveaux d'auto-efficacité indispensables pour bien écrire.

**Keywords**
writing self-efficacy, self-regulation, help seeking, revision, feedback, post-secondary students; auto-efficacité de l'écriture, auto-régulation, demander de l'aide, feedback, étudiants de niveau post-secondaire

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Writing an effective product requires successful decision making, problem-solving, and considerable reflection upon one's own writing capacity. These requirements for successful writing have the power to move us forward or paralyze us from progressing. The actions our students take at the point of feeling uncertain or stuck in the midst of their writing process may be characteristics that distinguish high and low self-efficacy writers. Writing self-efficacy is defined as self-assessed ability to successfully implement writing in a specific context. Albert Bandura's (1997) theoretical discussions of self-efficacy have stood the test of time and continue to play a role in educational research as a motivational concept which drives human agency. Traditionally, writing theorists identified that the writing process constitutes three recursive phases: planning or preparation to write, translating or the act of composing, and reviewing or revising (Flower & Hayes, 1977, 1981). The success of each of these phases is dependent on a writer's personal agency or ability to make appropriate choices to take specific actions intended to improve a writing product, all while facing competing distractions, anxiety, and emotional fluctuations.

More recent theoretical discussions of writing recognize that writing is a more complex social process which is disciplinary, contextually driven, and highly influenced by institutional and classroom conditions and belief systems about writing. Writing self-efficacy levels will also be influenced by these social conditions (Mitchell, 2018). Social research on writing and cognitive perspectives need not be mutually exclusive (Perry, 2012), and the social turn in writing theory should not negate the importance of social cognitive research on writing. While constructionist and sociocultural perspectives on writing have dominated the theoretical literature, there is apparent value in cognitive perspectives for the pragmatic approach they provide to pedagogy and student agency through instructional support.

Interventions aimed at helping students write may target writing behaviours such as help seeking, getting an early start with an assignment through advance planning activities, revision habits, and response to feedback; all actions broadly categorized as self-regulatory in nature. Bandura (1991) connected self-regulation to self-efficacy theory with his seminal paper. Self-regulation can be defined as the cognitive act of self-monitoring one's behaviour and its effects in relation to personal standards and the environmental context (Bandura, 1991). A reciprocal relationship exists between a student's writing self-regulatory behaviours and writing self-efficacy which impacts thought, affect, motivation, and actions (Bandura, 1991; Zimmerman & Bandura, 1994). Pajares and Valiante (2006) refer to self-efficacy and self-regulation as "kissing cousins" (p. 167). The reciprocal relationship between the two concepts reflects how they mutually influence each other. The presence of writing self-efficacy can increase student agency leading them to make self-regulatory choices. Acting on self-regulatory choices can influence self-efficacy levels. The catalyst between the two processes is the supportive nature of the social environment in which students are asked to write.

In contexts, such as being asked to complete a writing assignment, self-regulation is enacted via a process of forethought and goal setting which guides action to ensure the writing task is completed and completed in a manner that is acceptable to the writer (Bandura, 1991). In simplest terms, people pursue actions to develop capacity in a task such as writing, only if those actions are known or suspected to produce positive self-reactions. That motivator behind choosing to take action to improve writing ability may be internal (pride in their work) or external (for a specific grade). Motivational constructs of human agency, such as self-efficacy, are enhanced by the belief that a person has the power to effect positive change through their own actions (Bandura, 2006). Those positive self-reactions increase self-efficacy, decrease writing anxiety, and help students develop an enduring interest in writing. Writing self-efficacy, in turn, may keep students

writing over the long term which is the most powerful factor in improving writing outcomes (Mitchell, Harrigan, & McMillan, 2017).

When students are asked to write an academic paper as part of their coursework, in a writing scaffold environment, supports are put in place within that course's content and structure that help students solve problems and progress towards assignment completion (McMillan et al., 2007; Mitchell, Harrigan, Stefansson, & Setlack, 2017). However, in many circumstances, students are left to make choices within their writing process beyond those built into course pedagogy. Those choices may include: when, how often, and from whom they seek help during the writing process; if they start an assignment well in advance with forethought and planning or wait to complete it at the last minute; if they revise their written work or hand in a raw unfinished draft; and if, when they get feedback, they read, understand, reflect, and apply that feedback to future writing.

While self-regulatory choices have an influence on self-efficacy according to Bandura's (1997) theory, only scant research has been done to connect these writing behaviours to self-efficacy levels (e.g., Ekholm, Zumbrunn & Conklin, 2015; Mitchell, Harrigan, Stefansson et al., 2017; Williams & Takaku, 2011). By knowing which writing behaviours are associated with high and low self-efficacy and anxiety levels, educators will be able to identify interventions to improve these emotional and motivational constructs in students who doubt their ability to write. The purpose of this study was to explore patterns of writing self-efficacy, anxiety levels, and student grade point average (GPA), both over time and within relation to student self-reported choices in help seeking behaviours, advanced planning of writing prior to the due date, revision habits, and response to feedback.

## Review of the Literature

Research measuring writing self-efficacy and anxiety with respect to student choices in help seeking, advanced planning, revision habits, and feedback response is limited; however, it does provide some insights into the theoretical relationship between writing self-efficacy and self-regulatory behaviours.

### Help Seeking

Help seeking, or the act of seeking feedback when problems arise or when confirmation of choice of approach is required in the writing process, is one example of a self-regulatory behaviour. Having a degree of self-regulation and academic motivation should inspire students to seek help when needed and that help seeking should then inspire revisions to their writing (Feltham & Sharen, 2015; Pajares & Valiante, 2006). Jones (2008) has noted that failure to seek help with writing is a marker of low writing self-efficacy students. Karabenick (2004) observed help seeking choices are often contextually influenced. Perceived receptiveness of the person the student wishes to seek help from (instructor or peer) along with the student's goal orientation as either mastery oriented (learning) or performance oriented (e.g., for social status or grades) have combined influences on choices to seek help. There are conflicting findings in the research regarding the empirical relationship between help seeking and writing self-efficacy. Mitchell Harrigan, Stefansson, et al. (2017) found no differences in writing self-efficacy between students who reported seeking help, with help seeking defined as contact with an instructor, and those who did not, while Williams and Takaku (2011), who defined help seeking as writing centre use, found that it was the low self-

efficacy students who made the most visits. However, more research is required to clarify this contradiction in findings.

## Planning Writing in Advance of a Due Date

Writing a major academic paper often requires advanced preparation before a single word is written. Generating ideas, researching, reading, developing an outline, forming personal goals for writing, and taking time to think and reflect are all a part of the planning stage of writing (Flower & Hayes, 1981). Little research exists exploring the relationship between starting to work on an assignment in advance of a due date and writing self-efficacy levels. Jones (2008) states procrastination is a habit of students who have poor self-regulation and low self-efficacy. In contrast, Mitchell, Harrigan, Stefansson, et al. (2017) found that it was the students with the highest self-efficacy and highest grade who were more likely to report having completed their papers last minute in an introductory discipline-specific writing course in nursing. The authors suspected these strong students perhaps did not consider planning activities such as reading or lying in bed ruminating as acts that were a part of the planning and preparation process. Narrowly defining what it means to start a writing assignment may have contributed to their self-reports of writing at the last minute. This observation raises the question whether all forms of writing procrastination are created equal and may be evidence that beginning academic writers need to be taught that "starting my paper" means more than typing words. Student's may report starting a writing assignment last minute because they narrowly define beginning their assignment as "composing words." Not all last minute writing originates from a place of writing paralysis or disorganized planning. Thus, further exploration is required to assess if writing self-efficacy levels influence when a student begins writing an assignment in relation to its due date.

## Revision Habits

Revision is, by consensus, important to good writing and good writers will revise their written work at all stages of the process. Flower and Hayes (1977, 1981) define revision as a process that can occur in an ongoing fashion during the composing process or can be completed at the end of a draft during the re-read process. Theories of self-efficacy suggest three contributing factors that make students reluctant to revise their written work: holding a perspective that their writing will be inadequate regardless of effort; viewing requests for changes in their work as a threat to their identity; and perceiving their writing ability as a fixed skill (Feltham & Sharen, 2015). Others suggest that students are more likely to use revision to correct mechanical errors rather than improve the clarity of their meaning and content, the latter of which is how educators visualize revising (Wiltse, 2002). No previous research was identified connecting revision habits to writing self-efficacy levels.

## Feedback Response

Most of the literature exploring self-regulatory response to writing is focused on student response to feedback. Exploring feedback in relation to writing self-efficacy is appropriate as the component of Bandura's self-efficacy theory describing social persuasion suggests that feedback from significant others informs an individual's self-beliefs (Bandura, 1997). Evans (2013) conducted a review of articles published between 2000 and 2012 exploring assessment feedback

in higher education and included 460 articles analyzing the topic. Feedback is viewed in these articles as either an integral part of learning or a consequence of performance. There are numerous mechanisms for providing written responses to student writing. The most commonly performed are transmissive in execution – written summaries or annotations in margins with no opportunity for student response – are the least effective. These annotations can be handwritten or use "track changes" in a word processing program. Providing feedback is time consuming for evaluators (Ball, Franks, Jenkins, McGrath, & Leigh, 2009; Weaver, 2006; Wiltse, 2002) and emotional for both students and educators (Ekhom et al., 2015). However, feedback can effectively improve student writing when it is clear and understood by the student (Feltham & Sharen, 2015; Parboteeah & Anwar, 2009; Riddell, 2015).

The feedback process often occurs with the student and teacher remote from each other. Nevertheless, physical presence is not required for the feedback process to be considered a social interaction with profound effects on the student-teacher relationship (Evans, 2013). Responding to student writing is a complex process. Feedback provision is a genre of writing unto itself and is subject to numerous disconnects as students and teachers are often using different discoursal languages when writing or responding to feedback (Hodges, 1997). Educators write feedback assuming students will follow that feedback in future writing assignments, but several complications confound this process. First, students are often not in a place in their disciplines where they share the same understanding of academic disciplinary discourse as their teachers which contributes to a lack of understanding of the feedback they receive (Parboteeah & Anwar, 2009; Weaver, 2006). Second, when feedback focuses more on corrective processes rather than substantive issues related to content or meaning, students will focus on the grammatical corrections required, because they are easier to address, and ignore the more important corrections required for improvements to logic or content (Bardine, 1999; Torres & Anguiano, 2016). Third, feedback, even well intended feedback, can negatively influence a student's writing identity. Students view their assignments as extensions of themselves and feedback that demands a student take their identity out of their writing will negatively affect a writer's self-efficacy (Esambe, Mosito, & Pather, 2016; Torres & Anguiano, 2016).

Several surveys have been undertaken to explore student response to receiving feedback. Weaver (2006) found that 21-41% of the business and design students surveyed lacked confidence in understanding the feedback they received. Their responses to questions such as, "Was feedback written clearly, related to course outcomes, or assignment criteria?" was most often rated a luke-warm "usually" or "sometimes." Most students reported they were likely to act on feedback suggestions (80-83%), while fewer admitted to ignoring negative or critical feedback (9-20%). Moderately high percentages of students reported their feedback as simultaneously encouraging (45-55%) or demoralizing (39-45%) indicating the emotional roller-coaster inherent in receiving feedback on writing assignments. Similarly, Ball et al. (2009) reported students used their feedback to inform their next assignment (82%) and that it improved future performance (72%). This sample of nursing students reported that they could interpret their feedback (60%) and found it readable (47%) and clear (62%).

With respect to writing self-efficacy two studies report findings connecting feedback response to self-efficacy levels. Wiltse (2002), in a sample of media students, found writing apprehension (a form of writing anxiety) predicted students' use of their local or global feedback, but writing-self-efficacy did not have any influence on feedback use. Ekholm et al. (2015) in a sample of education and English students found writing self-efficacy and feedback perceptions predicted aptitude for self-regulation and feedback partially mediated the relationship between

writing-self efficacy and self-regulation. One of the conclusions to Evans's (2013) review was a call for further research exploring the relationships between feedback provision, emotional constructs, motivation, and the development of self-concept. Further exploration of the relationship between feedback response and self-efficacy will contribute to our understanding of how writing self-efficacy may contribute to a student's likelihood to use the feedback provided to them.

## Method

The data presented in this study was collected during a follow-up survey of a group of students who, when in first-year, participated in an exploration of writing self-efficacy in the context of a discipline-specific writing course. The students in the follow-up were in their third academic year even though some of them (34.7%) had not progressed to third-year courses. The primary goal in revisiting these students two years after the original study was to seek understanding of the longitudinal maintenance of writing self-efficacy within the context of an entire nursing program. That exploration was published (Mitchell & McMillan, 2018). We collected additional data in the follow-up survey to explore self-regulatory writing behaviours, which were not assessed in the first-year study. This present study examines this new primary data on self-regulatory behaviours and seeks to understand these behaviours in relation to the writing self-efficacy and anxiety data collected in the follow-up study. The sample of students included were registered in an accelerated nursing program with courses offered in three terms over an academic year thus compressing a four-year program into three years. The students were surveyed on two occasions, at the beginning (August 2015) and end (May 2016) of the 2015-2016 academic year. In order to capture their time as nursing students beyond their first year, the survey asked students to reflect on their writing experiences from the previous academic year.

The nursing program under study values the importance of writing as a learning strategy, as a mode of connecting theory to practice, and as a professionalization strategy for the advancement of the nursing profession. Students write at least one major academic paper a term involving incorporation of peer reviewed sources. They also write in various other genres (e.g., reflective journals, annotated bibliographies, letters to various stakeholders, and shorter analysis assignments). The institution under study does not have a writing centre. Individual nursing instructors facilitate the writing assignments according to personal expectations, course objectives, and preferences for writing conventions; however, writing tutor support is available from a student support centre and is typically provided by non-nursing personnel. Class sizes are large in the second- and third-years of the program (50-70 students), and most classes are team taught. Including a peer review process to facilitate writing was not a pedagogical strategy used at the time of this data collection in any of the courses requiring academic papers, although many students informally used peer review on their own. Most courses with an academic paper incorporate some scaffolded elements where students complete their preparation or the writing of their paper in smaller segmented sections. Many instructors also instituted a requirement that students meet with an instructor regarding some component of the research and writing process (e.g., to discuss topic ideas or review research articles). This requirement was more common in second-year courses versus third. For all assignments, instructional staff provide a grading rubric prior to assignment completion.

Of the students from the original first-year cohort eligible for participation (Mitchell, Harrigan, & McMillan, 2017), 79 students were surveyed in August with 49 returning completed

questionnaires (62.0% response rate). By May, five of the students who returned completed questionnaires in August, had left the program, thus 44 surveys were distributed, and 32 questionnaires were returned (72.7% response rate).

Ethical approval was obtained for the follow-up survey from the Research Ethics Board at the instructional institution. A student advisor not involved with the study assisted with identifying eligible students via their student numbers collected in the first-year study. The questionnaires were delivered to eligible students either by the first author (at their August orientation day) or by a proxy instructor teaching a course in which a potential participant was registered. A letter was included on the front of each survey explaining the study procedures and describing their informed consent. A returned questionnaire was considered consent to participate. To maximize participation, two email reminders were sent to students encouraging the return of the survey. No stipend or grade bonus was offered to students for participating in the follow-up.

## Measures

**Self-Efficacy Scale for Academic Writing (SESAW).** This scale was developed in a nursing context (Mitchell, Harrigan, Stefansson, et al. 2017). The scale format is a 10-item 4-point Likert. Scores can range from 4 to 40 with a higher score reflecting higher self-efficacy. The scale has exhibited strong internal consistency reliabilities ranging from .82-.90. Concurrent validity with the Post-Secondary Writerly Self-Efficacy Scale (Schmidt & Alexander, 2012) ranged from .76-.81 (Mitchell & McMillan, 2018).

**Post-Secondary Writerly Self-Efficacy Scale (PSWSES).** The PSWSES is a 20-item scale and was developed in a writing centre environment (Schmidt & Alexander, 2012). For use in non-writing centre studies, the last item of the scale asking about use of tutors can be excluded. This makes the PSWSES a 19-item instrument where participants are asked to rate their level of agreement on a 0-100 scale. Cronbach's alpha was found to be .93 on initial testing. In the current study, Cronbach's alpha was .95-.96 in both follow-up assessments.

**Visual Analog Scale for Anxiety (VAS-Anxiety).** Anxiety was assessed with the following question, "When you think about having to write a scholarly paper in your classes in the upcoming school year, how anxious does this make you feel?" This single-item assessment of anxiety was presented to students with the anchors "not at all anxious" and "as anxious as I can imagine" along a 100 mm line and is the same scale reported in Mitchell, Harrigan, Stefansson, et al. (2017). A VAS was chosen to reduce response burden given the length of the questionnaires assessing the primary variable of writing self-efficacy and the demographic and writing behaviours questionnaire.

**Grade Point Average (GPA).** Student institution-wide GPAs were gathered from student records. GPA reflects the student average grade in all courses attempted and completed in a program of study. GPA scores could range from 0-4.5 with 0 reflecting a letter grade of F and 4.5 reflecting a letter grade of A+. Because only institution-wide GPA was available, students who had attended the college in other programs, including nursing access programs, prior to nursing admission would have that course work reflected in their institutional GPA. Students with grades from other college programs represented 13/49 students in the August sample (26.5%).

**Demographic and writing behaviours questionnaire.** Demographic information for this study was not collected again, thus demographic information, for students participating in the follow-up, was extracted from the previous study done on the same cohort when they were in first-year (Mitchell, Harrigan, & McMillan, 2017). Instead, a writing behaviours questionnaire was

included requesting students provide information about their writing help seeking behaviours, who they sought help from (formal tutors, friends and family, fellow students), their contact with their instructor, how far in advance of a due date they began writing their papers, their revision habits, and their response to feedback provided about their writing such as their feelings about the feedback they had received and if they read and understood that feedback. In answering these questions, students were asked to reflect upon their previous academic year.

### Statistical Analysis

Statistical analysis was conducted using the Statistical Program for the Social Sciences (version 25). Descriptive statistics, McNemar's Chi-square, mixed between-within groups analysis of variance (ANOVA), and linear regression were the primary statistical procedures used to explore mean levels of writing self-efficacy, anxiety, and GPA scores based on student self-categorization within the self-regulatory behaviours of help seeking, advanced planning, revision habits, and response to feedback.

## Results

The demographic and writing behaviour characteristics of the sample (N = 49) are presented in Table 1. Participants were primarily female (87.8%), under the age of 29 (65.3%), raised speaking English (77.6%), and had entered the nursing program with some college or university experience (65.3%). Mean sample scores in August (n = 49) were as follows: SESAW ($M$ = 29.97, $SD$ = 4.26); PSWSES ($M$ = 73.60, $SD$ = 16.37); and Anxiety ($M$ = 58.06, $SD$ = 25.71). Mean sample scores in May (n = 32) were as follows: SESAW ($M$ = 31.69, $SD$ = 4.01); PSWSES ($M$ = 74.25, $SD$ = 16.84); and Anxiety ($M$ = 42.47, $SD$ = 31.84). Mean institutional GPA for the sample (n = 49) was 3.41($SD$ = 0.49).

Table 1
*Demographic and Writing Behaviour Characteristics of the Sample*

| | August 2015 *N* = 49 | | May 2016 *N* = 32 | |
|---|---|---|---|---|
| | *n* | % | *n* | % |
| Age at Entrance to Nursing Program | | | | |
| <=24 | 17 | 34.7 | | |
| 25-29 | 15 | 30.6 | | |
| 30-34 | 10 | 20.4 | | |
| 35+ | 7 | 14.2 | | |
| Gender | | | | |
| Male | 6 | 12.2 | | |
| Female | 43 | 87.8 | | |
| English as Second Language | | | | |
| Yes | 10 | 20.4 | | |
| No | 38 | 77.6 | | |
| Missing | 1 | 2.0 | | |
| Prior Education | | | | |
| High School or equivalent | 4 | 8.2 | | |
| Some College/university | 32 | 65.3 | | |
| Previous diploma | 10 | 20.4 | | |
| Previous degree | 3 | 6.1 | | |
| Year in Program at Start of Follow-up | | | | |
| 2 | 17 | 34.7 | | |
| 3 | 32 | 65.3 | | |
| Sought Formal Tutor for Writing | | | | |
| Yes | 6 | 12.2 | 2 | 6.3 |
| No | 43 | 87.8 | 30 | 93.8 |
| Sought help from a friend/family (not a classmate) | | | | |
| Yes | 24 | 49.0 | 13 | 40.6 |
| No | 25 | 51.0 | 19 | 59.4 |
| Sought help from classmate or other nursing student | | | | |
| Yes | 20 | 40.8 | 11 | 34.4 |
| No | 29 | 59.2 | 21 | 65.6 |
| Contact with Instructor * | | | | |
| None | 6 | 12.2 | 11 | 34.4 |
| Brief Help | 40 | 81.6 | 20 | 62.5 |
| Lengthy Meeting | 3 | 6.1 | 1 | 3.1 |

| | | | | |
|---|---|---|---|---|
| When do you start writing your papers?** | | | | |
| >One week before due date | 37 | 75.5 | 12 | 37.5 |
| Within last week before due date | 9 | 18.4 | 15 | 46.9 |
| Within 2 days of due date | 3 | 6.1 | 4 | 12.5 |
| 12-24 hours prior to due date | 0 | | 1 | 3.1 |
| Do you revise your paper? | | | | |
| Revise while writing, skim after | 20 | 40.8 | 12 | 37.5 |
| Rough draft, major edits multiple re-reads | 29 | 59.2 | 19 | 59.4 |
| No revisions, hand in as soon as done | 0 | | 1 | 3.1 |
| How do you feel about the feedback you get on your writing? | | | | |
| Positive about writing capability | 35 | 71.4 | 22 | 68.8 |
| Negative about writing capability | 14 | 28.6 | 9 | 28.1 |
| Do you read your feedback when a paper is returned? | | | | |
| Never look at it | 3 | 6.1 | 1 | 3.1 |
| Look at grade and comments, don't know what to do with it | 14 | 28.6 | 8 | 25.0 |
| Take feedback into consideration on future assignments | 32 | 65.3 | 23 | 71.8 |

* McNemar-Bowker test $X^2 = 9(df = 2)$, $p = .01$; ** McNemar's test on collapsed categories of > one week and < one week $p < 0.001$

In most self-regulation assessments (help seeking, advanced planning, revision, feedback) students reported very little change in behaviour from the first measure to the second measure (Table 1). In terms of help seeking behaviours, seeking help from a friend or family member (40.6-49.0%), or classmate (34.4-40.8%) was chosen more often than seeking help from formal tutors (6.3-12.2%). Students often sought help from instructors but used this option less often the further they were into their program (87.8% reported help seeking in August versus 65.63% in May, $p = .01$).

Regarding feedback, many students reported not knowing what to do with the written feedback on their papers (25-28.6%), but most students reported, at least, reading the feedback they were given (93.9-96.8%), and about three quarters of the students reported feeling positive about their writing after reading that feedback (68.8-71.4%).

When asked how far in advance of the due date they began writing their papers, very few participants in this sample were last minute writers beginning their assignments within two days before the due date (6.1% August; 15.6% May). Most students reported beginning writing a week or greater in advance of the due date in August, but this behaviour had decreased by the May reporting (75.5% August; 37.5% May, $p < .001$). Beginning to write with time prior to the due date allowed them time to write rough drafts, edit, and re-read their papers multiple times (59.2-59.4%). Re-reading a paper multiple times was the revision behaviour most often reported by this group of students.

## Writing Behaviours

A mixed between-within subjects ANOVA was conducted to assess the relationship between the self-regulatory behaviour choices of students, indicated at the August data collection, and writing self-efficacy (SESAW and PSWSES) and anxiety across the two time periods. The results are presented in Tables 2, 3, and 4. Missing data was imputed for the students who

completed the August but not the May survey. For the PSWSES and Anxiety measures, the August score was carried forward as the May Score. For the SESAW, a mean score for all SESAW responses given by an individual participant across the entire longitudinal study was used to replace the missing responses at the May data collection. The number of sources a student sought help from (formal tutoring, friends and family, or other nursing students) were counted and recategorized as no help, help from one source, and help from two or more sources. Help from instructors was excluded from these counts because, in some courses, a discussion with an instructor was a required element of the assignment (especially in second-year courses) and not a self-regulated choice of the student, hence why May reports of help seeking from instructors were reported less often. Due to low numbers in some cells, the feedback read, advanced planning, and revisions categories were collapsed into dichotomous categories as indicated in Table 2-4.

Most self-regulatory categories exhibited a significant main effect for time. SESAW scores increased and anxiety score decreased between measurement points. The PSWSES scale did not demonstrate a main effect for time in any category. Numerous significant relationships emerged when exploring self-regulatory choices and their relationship to SESAW, PSWSES, and Anxiety scores by main effect for group. SESAW scores were significantly higher in students who reported reading and applying their feedback ($p = .001$), felt their feedback made them feel positive about their capabilities as a writer ($p < .001$), and did not seek help from outside sources ($p = .005$). PSWSES scores were significantly higher in students who reported reading and applying their feedback ($p = .003$), felt their feedback made them feel positive about their capabilities as a writer ($p < .001$), and did not seek help from outside sources compared to seeking help from just one outside source ($p = .02$). Anxiety scores were significantly lower in students who reported reading and applying their feedback ($p = .025$), felt their feedback made them feel positive about their capabilities as a writer ($p = .002$), but had no discernable relationship based on number of sources a student sought help from.

There were two discernable significant interaction effects for time and group (Table 5) in students who reported reading and applying their feedback when compared to students who reported not knowing what to do with their feedback ($p = .004$) and in students who did and not feel positive about their writing after receiving feedback ($p = .014$). Students who reported reading and applying their feedback ($p < .001$) or that their feedback made them feel positive about their writing ($p < .001$) demonstrated a reduction in anxiety over time while students who reported not knowing what to do with their feedback or that their feedback made them feel negative about their writing showed no change in their anxiety over time.

There were numerous critical non-significant results when exploring writing self-efficacy, writing anxiety and GPA in relation to self-regulatory writing behaviours. No significant main effects for group were observed based on self-regulatory choices of starting their paper in advance of the due date or based on their reported revision habits for SESAW, PSWSES, or Anxiety scores. A linear regression model exploring the contributions of the self-regulatory choices (feedback, planning, help seeking and revisions) identified that no category of self-regulation made a significant contribution to student program-wide GPA.

Table 2

*Mixed between-within Subjects ANOVA for SESAW in Relation to Self-Regulatory Behaviour Categories (n = 49)*

| | August | | May | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | | Wilks' Lambda | *F*(df) | *p* | Partial eta squared[1] |
| When I receive a grade and instructor feedback for my work I usually: | | | | | Time x group Interaction Effects | .99 | .68(1,47) | .42 | .01 |
| Never look at it; or look at my grade and read my instructor's comments but I never know what to do with that feedback. (*n* = 17) | 26.7 | 3.5 | 28.6 | 4.0 | Main effect across Time | .76 | 14.5(1,47) | <.001 | .24 |
| Look at my grade and read my instructor's comments carefully and when I write my next assignment, I take the relevant feedback into consideration. (*n* = 32) | 30.4 | 3.6 | 31.7 | 2.4 | Main effect by group | | 11.7(1,47) | .001 | .20 |
| Receiving feedback about my writing typically causes me to feel: | | | | | Time x group Interaction Effects | .98 | .85(1,47) | .36 | .02 |
| Positive about my capabilities as a writer (*n* = 35) | 30.4 | 3.4 | 31.7 | 3.7 | Main effect across Time | .76 | 14.3(1,47) | <.001 | .23 |
| Negative about my capabilities as a writer (*n* = 14) | 25.9 | 3.4 | 27.0 | 2.9 | Main effect by group | | 16.9 | <.001 | .26 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Number of sources a student sought help from: | | | | | Time x group Interaction Effects | .93 | 1.6(2,46) | .21 | .07 |
| Did not seek help ($n$ = 12) | 31.9 | 4.0 | 29.4 | 3.2 | Main effect across Time | .73 | 16.9(1,46) | <.001 | .27 |
| Sought help from one source ($n$ = 25) | 28.5 | 3.7 | 30.1 | 3.9 | Main effect by group | | 6.0(2,46) | .005* | .21 |
| Sought help from two or more sources ($n$ = 12) | 27.5 | 3.3 | 30.6 | 3.9 | | | | | |
| When do you start writing your paper? | | | | | Time x group Interaction Effects | 1.0 | .41(1,47) | .52 | .01 |
| Greater than a week before the due date ($n$ = 37) | 29.4 | 3.7 | 31.0 | 3.9 | Main effect across Time | .85 | 8.3(1,47) | .01 | .15 |
| Less than a week before the due date ($n$ = 12) | 28.3 | 4.9 | 29.4 | 3.8 | Main effect by group | | 1.2(1,47) | .29 | .02 |
| Do you revise your paper? | | | | | Time x group Interaction Effects | .98 | .86(1,47) | .36 | .02 |
| Rough draft, major edits multiple re-reads ($n$ = 29) | 29.1 | 3.0 | 30.9 | 4.0 | Main effect across Time | .79 | 12.3(1,47) | .001 | .21 |
| No revisions; revise while writing and only skim after completion ($n$ = 20) | 29.2 | 5.1 | 30.2 | 3.8 | Main effect by group | | .08(1,47) | .79 | .002 |

[1] Partial eta squared: effect size small .01, moderate .06, large .14

*Post hoc Tukey – no sources vs. 1 source: $p$ = .01; 1 source vs. 2 or more: $p$ = .02

Table 3

*Mixed between-within Subjects ANOVA for PSWSES in Relation to Self-Regulatory Behaviour Categories (n = 48)*

| | August | | May | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | | Wilks' Lambda | *F*(df) | *p* | Partial eta squared[1] |
| When I receive a grade and instructor feedback for my work I usually: | | | | | Time x group Interaction Effects | 1.0 | .02(1,46) | .89 | <.001 |
| Never look at it; or look at my grade and read my instructor's comments but I never know what to do with that feedback. (*n* = 17) | 61.4 | 19.2 | 61.7 | 20.3 | Main effect across Time | 1.0 | .14(1,46) | .71 | .003 |
| Look at my grade and read my instructor's comments carefully and when I write my next assignment, I take the relevant feedback into consideration. (*n* = 32) | 75.3* | 12.4 | 78.5* | 12.1 | Main effect by group | | 9.9(1,46) | .003 | .18 |
| Receiving feedback about my writing typically causes me to feel: | | | | | Time x group Interaction Effects | 1.0 | .004(1,46) | .95 | <.001 |
| Positive about my capabilities as a writer (*n* = 35) | 76.8* | 11.6 | 77.2* | 12.0 | Main effect across Time | 1.0 | .18(1,46) | .67 | .004 |
| Negative about my capabilities as a writer (*n* = 14) | 54.8 | 16.1 | 55.4 | 16.6 | Main effect by group | | 29.6(1,46) | <.001 | .39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Number of sources a student sought help from: | | | | | Time x group Interaction Effects | .91 | 2.3(2,45) | .11 | .09 |
| Did not seek help ($n$ = 12) | 80.2 | 13.4 | 82.8 | 12.9 | Main effect across Time | .97 | 1.4(1,45) | .24 | .03 |
| Sought help from one source ($n$ = 25) | 67.1 | 14.3 | 65.4 | 13.6 | Main effect by group | | 4.2(2,45) | .02** | .16 |
| Sought help from two or more sources ($n$ = 12) | 67.2 * | 20.5 | 70.2* | 20.9 | | | | | |
| When do you start writing your paper? | | | | | Time x group Interaction Effects | 1.0 | .004(1,46) | .95 | <.001 |
| Greater than a week before the due date ($n$ = 37) | 72.3* | 15.3 | 72.8* | 16.2 | Main effect across Time | 1.0 | .12(1,46) | .73 | .003 |
| Less than a week before the due date ($n$ = 12) | 64.7 | 18.9 | 65.1 | 17.4 | Main effect by group | | 2.1(1,47) | .15 | .04 |
| Do you revise your paper**?** | | | | | Time x group Interaction Effects | 1.0 | .01(1,46) | .94 | <.001 |
| Rough draft, major edits multiple re-reads ($n$ =2 9) | 72.4* | 13.9 | 72.8* | 15.7 | Main effect across Time | 1.0 | .20(1,46) | .66 | .004 |
| No revisions; revise while writing and only skim after completion ($n$ = 20) | 67.6 | 19.4 | 68.1 | 18.1 | Main effect by group | | 1.0(1,47) | .32 | .02 |

[1] Partial eta squared: effect size small .01, moderate .06, large .14

* n = 48 one unanswered PSWSES questionnaire

** Post hoc Tukey – no sources vs. 1 source: $p$ = .02

Table 4

*Mixed between-within Subjects ANOVA for VAS-Anxiety in Relation to Self-Regulatory Behaviour Categories (n = 49)*

| | August | | May | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | | Wilks' Lambda | *F*(df) | *p* | Partial eta squared[1] |
| When I receive a grade and instructor feedback for my work I usually: | | | | | Time x group Interaction Effects | .83 | 9.4(1,47) | .004 | .17 |
| Never look at it; or look at my grade and read my instructor's comments but I never know what to do with that feedback. (*n* = 17) | 61.0 | 27.4 | 63.4 | 29.1 | Main effect across Time | .90 | 5.4(1,47) | .025 | .10 |
| Look at my grade and read my instructor's comments carefully and when I write my next assignment, I take the relevant feedback into consideration. (*n* = 32) | 61.3 | 27.9 | 44.5 | 33.8 | Main effect by group | | 1.2(1,47) | .28 | .03 |
| Receiving feedback about my writing typically causes me to feel: | | | | | Time x group Interaction Effects | .88 | 6.5(1,47) | .014 | .12 |
| Positive about my capabilities as a writer (*n* = 35) | 56.1 | 27.8 | 41.0 | 31.1 | Main effect across Time | .93 | 3.7(1,47) | .06 | .07 |
| Negative about my capabilities as a writer (*n* = 14) | 73.9 | 22.8 | 76.1 | 24.4 | Main effect by group | | 10.4(1,47) | .002 | .18 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Number of sources a student sought help from: | | | | | Time x group Interaction Effects | .99 | .26(2,46) | .77 | .01 |
| Did not seek help (*n* = 12) | 47.7 | 32.9 | 36.4 | 37.3 | Main effect across Time | .82 | 9.9(1,46) | .003 | .18 |
| Sought help from one source (*n* = 25) | 65.2 | 23.6 | 57.2 | 28.7 | Main effect by group | | 2.1(2,46) | .14 | .08 |
| Sought help from two or more sources (*n* = 12) | 66.4 | 27.1 | 52.8 | 36.2 | | | | | |
| When do you start writing your paper? | | | | | Time x group Interaction Effects | 1.0 | .22(1,47) | .64 | .005 |
| Greater than a week before the due date (*n* = 37) | 62.6 | 27.2 | 51.5 | 34.1 | Main effect across Time | .89 | 6.0(1,47) | .02 | .11 |
| Less than a week before the due date (*n* = 12) | 57.1 | 29.2 | 49.6 | 31.8 | Main effect by group | | .15(1,47) | .70 | .003 |
| Do you revise your paper? | | | | | Time x group Interaction Effects | 1.0 | .13(1,47) | .72 | .003 |
| Rough draft, major edits multiple re-reads (*n* = 29) | 62.5 | 26.1 | 53.3 | 34.3 | Main effect across Time | .83 | 9.8(1,47) | .003 | .17 |
| No revisions; revise while writing and only skim after completion (*n* = 20) | 59.4 | 30.0 | 47.8 | 32.1 | Main effect by group | | .27(1,47) | .61 | .01 |

[1] Partial eta squared: effect size small .01, moderate .06, large .14

Table 5

*Interaction Effects between Time and Feedback Self-regulation Groups Based on VAS-Anxiety Scores*

| | Anxiety August | | Anxiety May | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Mean | CI | Mean | CI | Wilks' Lambda | *F* | df | *p* | Partial Eta Squared[1] |
| When I receive a grade and instructor feedback for my work I usually: | | | | | | | | | |
| Never look at it; or look at my grade and read my instructor's comments but I never know what to do with that feedback. (*n* = 17) | 61.0 | 47.5-74.5 | 63.4 | 47.6-79.1 | 1.0 | 0.22 | 1,47 | .64 | .01 |
| Look at my grade and read my instructor's comments carefully and when I write my next assignment, I take the relevant feedback into consideration. (*n* = 32) | 61.3 | 51.5-71.2 | 44.5 | 33.0-56.0 | .69 | 20.9 | 1,47 | <.001 | .31 |
| Receiving feedback about my writing typically causes me to feel: | | | | | | | | | |
| Positive about my capabilities as a writer (*n* = 35) | 56.1 | 47.1-65.2 | 41.0 | 31.0-51.0 | .73 | 17.4 | 1,47 | <.001 | .27 |
| Negative about my capabilities as a writer (*n* = 14) | 73.9 | 59.7-88.2 | 76.1 | 60.3-91.9 | 1.0 | 0.14 | 1,47 | .71 | .003 |

[1] Partial eta squared: effect size small .01, moderate .06, large .14

## Discussion

This study provides preliminary evidence that the students we want seeking help, those with lower writing self-efficacy and higher anxiety, are the ones seeking help which is similar to the finding reported in William and Takaku (2011) based on their sample of writing centre students. On the surface, this is contrary to theories of writing self-efficacy and help seeking which hypothesize that high self-efficacy students are the ones most likely to seek help (Jones, 2008; Feltham & Sharen, 2015; Pajares & Valiante, 2006). However, the writing self-efficacy levels in the help seeking students could more accurately be described as moderate than low. High self-efficacy students require less help because they have developed problem solving strategies over time and are self-sufficient, use reflection as a problem-solving strategy, or they were able to address their needs with a quick conversation with an instructor and did not require other sources of help. Students who only used their instructors as sources of help would have recorded a help seeking count of zero sources in this study. In order to seek help, students require some degree of awareness that seeking help will generate a positive change in their writing outcome. In order to believe that seeking help will result in a positive change in writing ability, some degree of writing self-efficacy is required (Bandura, 1991). The moderate levels of writing self-efficacy reported by the help seeking students may have been sufficiently high enough to motivate seeking help.

Writing self-efficacy patterns also emerged with respect to student response to their feedback. Asking students if their emotional response to their writing feedback was positive or negative unsurprisingly sorted low self-efficacy, high anxiety, students into the negative feelings category. This result held when using both the SESAW and PSWSES scales. This single question is a proxy measure for the social persuasion source of writing self-efficacy (Bandura, 1997) which identifies that feedback from significant qualified others in the writer's life will influence their writing self-beliefs. In addition, patterns emerged with respect to whether students applied their feedback to future assignments or if they did not know what to do with that feedback. Higher writing self-efficacy students were more likely to report attempting to apply their feedback and this pattern held for both writing self-efficacy instruments applied during this study. Ekholm et al. (2015) reported that positive responses to feedback were associated with positive perceptions of writing ability. Weaver (2006) suggested that it was unknown if low self-efficacy begets a negative response to feedback or if a negative response to feedback contributes to low self-efficacy. Likely there is a degree of reciprocity in these experiences.

Interestingly, the students who displayed positive responses to feedback in terms of feeling good about their writing and applying their feedback to future assignments demonstrated a drop in anxiety over time while students who felt negative about their feedback and reported not knowing what to do with it, demonstrated no change in their anxiety across the academic year. This finding confirms the connections reported in the literature between feedback and student anxiety in writing (Evans, 2013) and emphasizes the importance of instructor involvement in anxiety management during the provision of feedback on writing assignments.

Unexpectedly, no differences in writing self-efficacy or anxiety emerged based on student habits of revision or starting to write their paper nearer or further away from its assigned due date, meaning both high and low self-efficacy students revise and consider advance planning in writing assignments. As Mitchell, Harrigan, Stefansson, et al. (2017) observed, students may not be considering the more invisible aspects of writing (reading, note taking, reflecting) when they assign a start date to writing their paper which could have resulted in a variety of interpretations of the question in the survey. Students also could have various definitions as to what counts as

revising their paper from using spell check in a word-processing program to substantive logic and content revisions (Bardine, 1999), which also may have contributed to the random distribution of self-efficacy scores based on revision habits. One study (Ferrari, Bouffard, & Rainville, 1998) observed students' revision habits in an in-class writing environment in French, and noted that both good and poor writers revise their work but poor writers were more likely to introduce errors into their writing or make ineffective changes during their revision, indicating that effective revision strategies must be taught for the particular genre of writing being evaluated.

Student GPA scores also had no relationship with the self-regulatory behaviours assessed in this study indicating that students' sought help, started their papers early, revised their papers or responded to their feedback based on contextual issues with the assignments rather than as a habit associated with their overall GPAs. Students in this sample may have been satisfied with their GPA. Educators often assume that students are motivated to take actions in their coursework which will have benefits to their GPA but this may be a faulty assumption. In a highly rigorous program such as nursing, as a prioritization strategy and survival tactic, students may choose not to take additional time-consuming actions to improve their writing skills simply because they have chosen to accept their current academic status. The degree of student satisfaction with their current GPA, as a motivational factor that might influence self-regulatory choices intended to help improve their writing, was not assessed in this research but should be a future consideration.

## Study Limitations

This study is limited by its small sample size and to students who are in their third year of an accelerated nursing program and who had been provided a discipline-specific writing course in the first year of their program. In addition, because the sample was limited to students who had participated in an earlier writing self-efficacy study, there are limitations to these findings based on students who can produce acceptable writing, grades (the average GPA was in the B range), and had moderately high writing self-efficacy levels. Most of the weakest students had already been eliminated from the study due to program or study attrition. Because of the differences in requirements for seeking help with their writing from instructors in this program, where help seeking was required as a scaffolding instructional method in some courses but not in others, help-seeking from instructors was not included in the counts of help seeking sources. As seeking help from an instructor is often the easiest form of help seeking, assessing the number of times a student sought help from an instructor may have had its own relationship with writing self-efficacy, anxiety, or GPA. Measuring anxiety via a one-item questionnaire should also be examined with caution. The visual analog scale used for anxiety asked the students to envision their next scholarly paper when responding to the item. During the May survey, some students would have been nearing completion of their nursing program and may not have had a specific future paper to envision thus resulting in artificially low anxiety responses. Finally, this study explores writing self-regulatory strategies, in their naturally occurring state. It is unknown how the instructional practices that the many different educators that the student participants were in contact with over this academic year might have impacted their choices. As writing is a community practice, the specific nature of how interactions between faculty and student, and peer to peer between students, might have influenced their writing self-efficacy and anxiety is unknown.

## Considerations for Writing Pedagogy

The proportion of students who reported using their feedback to inform future writing assignments was lower in this sample (65.3-71.8%) than in Ball et al. (2009) at 82.2%. While observing that 28.1-34.7% of the sample did not know what to do with their feedback (or never looked at it) is similar to student reports of confusion over the meaning of their feedback reported in the literature, it is concerning that nearly a third of students are failing to perceive the benefits of the feedback provided to them. Evans (2013) identified that student willingness to follow feedback was dependent on the emotional impact of that feedback, the pedagogical intelligence of the student, and past experiences with feedback use. Students may also not know how to apply feedback to future writing because they might unconsciously recognize circumstances where the feedback is not transferable from one genre to the next. James (2010), in a study exploring the kinds of learning outcomes likely to transfer between courses, identified that some types of writing outcomes associated with learning (e.g., language and discourse) are more transferable than others (e.g., organizational and cohesion tasks like framing). Ensuring students understand their feedback on their writing assignments and know when it is relevant to a future assignment is a problem amenable to intervention. As educators control the instructional environment, they are responsible for supporting and guiding students to understand the feedback they receive on their writing (Ekholm et al., 2015). Educators can also support students' anxiety responses to that feedback and be mindful of the powerful impression feedback can leave on vulnerable students. Feedback should be written with the goal of shaping students' learning and a sense of conscientiousness toward not attacking a student's ego is required to provide effective feedback (Evans, 2013).

Qualitative research asking students to discuss their response to the feedback they have read has confirmed the social impact inherent in the feedback process and the identity formation present in the act of writing (Torres & Anguiano, 2016). Students prefer personalized feedback that recognizes that a person is attached to the writing. They are less concerned with all their comments being positive versus critical, but desire, in both instances, that the comments are well explained (Bardine, 1999). Understanding of feedback can be inferred in situations when the student is able to interpret why the feedback was given, come up with a suitable revision solution, and explain how the feedback contributed to informing the improvements they made in their writing (Zhao, 2010). Most of the feedback provided to students on their writing in the cohort represented in this study is transmissive in nature, rather than the more effective iterative processes where students would respond to feedback in an ongoing and dialogic process such as through one-on-one face to face meetings or reflections that respond to evaluator comments.

Feedback cannot be separated from the process of revision in this perspective. Success in improving writing and writing self-efficacy in students is contingent on revision following the feedback process. Riddell (2015) provided several solutions for connecting feedback to the revision process including having students mark sample essays, which served the purpose of helping them identify areas in their own writing where they were failing to clearly explain content. In this present sample, informal peer review was used as a help seeking source by 34.4-40.8% of the student sample indicating that students were open to sharing their work with their peers and trusted their judgement with feedback given. Peer assessment is reported to be an intervention which can also promote student self-regulation (Evans, 2013). Peer review may also be a solution to the time-consuming nature of providing multiple rounds, or feedback loops, to writing instruction. Riddell estimated that the extra feedback involved in her intervention of multiple drafts amounted to 20% more grading over standard arms-length methods of instructional staff providing

feedback to students but that extra work did translate into improved writing and a 6-8% increase in student grades.

## Conclusion

Writing self-efficacy and self-regulation of writing are linked and mutually influence one another. In this study, help-seeking and feedback response had the strongest association with writing self-efficacy and anxiety. Future studies are needed to explore solutions to students' lack of understanding of the feedback they receive on their writing. As feedback is reciprocally related to the revision process, feedback and revisions pedagogies should be linked more directly in classrooms if writing improvement is to be observed. Future research needs to also address the inconsistencies found in this study with respect to writing self-efficacy levels, revision and completion of assignments in relation to its due date by more clearly defining for students what it means to revise a paper and what activities fall under the purview of getting started with writing. Interventions to improve student writing are imperative to a professional discipline, such as nursing, which relies on effective communication of evidence-based practice to build successful interdisciplinary teams and provide effective patient care.

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