

*Writing Center Users Procrastinate Less:
The Relationship between Individual Differences in Procrastination,
Peer Feedback, and Student Writing Success*

by Beth Rapp Young and Barbara A. Fritzsche

Writing center directors have long believed that writing center use reduces student procrastination. This study empirically tests that belief by examining the relations between procrastination tendency, peer feedback¹, and student writing success in writing-intensive courses.

All of us are familiar with the disappointing symptoms of procrastination behavior. When a student shows us a paper that outlines the main focus at the end, that overlooks important points, that displays only sketchy support from outside sources, that is marred by surface level errors, that barely reaches the assigned length, we know that paper doesn't represent the student's best work. More likely, that paper is a first draft written during an "all-nighter" by a student fortified with caffeine and sugar. While writing centers are accustomed to helping students transform these first drafts, a writing center's usefulness is impeded when writers consider the first draft to be the final draft (with occasional grudging exception for minor corrections to vocabulary or punctuation).

Indeed, student writers may have no choice but to submit their first draft as their final draft, because the paper deadline may loom too closely for significant revision. Many teachers try to structure assignments and to assign revision activities to eliminate the last-minute "final" draft, but student procrastination can't always be eliminated with thoughtful assignment design.

When procrastination forecloses the possibility of revision, the consequences extend beyond the assignment grade. Papers are assigned in order to help students learn; students

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who don't work on the writing aren't doing the learning. A failure to learn the material hinders students' progress towards their academic goals. In fact, although Joseph R. Ferrari, Judith L. Johnson and William G. McCown point out that procrastination can at times be in the procrastinator's ultimate self-interest (e.g., delaying the payment of U.S. income tax as long as legally permitted), clearly for college students, procrastination is often costly. Small wonder that, among college students, procrastination is associated with a variety of negative consequences beyond writing bad papers: perfectionism, depression, low grades, social anxiety, irrational beliefs, self-handicapping, low self-confidence, cheating, and low self-esteem (e.g., Boice; Ferrari; Hewitt, Mittelstaedt, and Woellert; Kennedy; McKean; Roig and DeTommaso; Solomon and Rothblum; Burka and Yuen).

Unfortunately, such procrastination is all too common. In one study of 291 college students, over 40% of the participants reported that they always or nearly always procrastinated on writing a term paper (Solomon and Rothblum). And procrastination may increase as time passes. Mary B. Hill, David A. Hill, Albert E. Chabot and James F. Barrall, surveying more than 500 students at five different institutions, found that approximately half the participants reported procrastinating half of the time or more on academic tasks, and that seniors were even more likely to procrastinate than freshmen.

Procrastination is an especially serious problem for student writing. In Laura J. Solomon and Esther D. Rothblum's 1984 study, more students (46%) procrastinated on writing papers than any other academic activity. The high frequency of procrastination hinders learning in writing-intensive classes because writing is a complex cognitive activity that often cannot successfully be carried out in one hurried draft (Hayes and Flower). Furthermore, lack of revision can lead to writers block, as the writer tries unsuccessfully to achieve perfection in the initial draft (Rose). The high frequency of student procrastination also has consequences for writing centers, which may be confronted with students unwilling to revise (or worse, not confronted with these student writers at all).

What We Expected

In order to examine the relationships between procrastination tendency, peer feedback, and student writing success, we outlined key concepts and expectations.

Procrastination is defined as "the act of needlessly delaying tasks to the point of subjective discomfort" (Solomon and Rothblum). In other words, writing delay behaviors only rise to the level of procrastination when the writer is unhappy with them. Delay is not procrastination if writers see value in the delay or if writers don't mind the delay (even if teachers or writing center consultants disagree).

In order to determine whether a writing center helps writers avoid procrastinating, a distinction must be drawn between procrastination *tendency* and procrastination *behavior*.

Psychologists consider procrastination *tendency* to be a relatively stable aspect of personality that is likely to influence behavior across a variety of situations (Solomon and Rothblum). By contrast, procrastination *behavior* involves actual physical delay; it is an action rather than a quality.

As an analogy, someone might be born with a tendency towards shyness. However, that person might be the life of the party at the annual family reunion. To the extent that shyness causes personal distress, it is useful to know what can help people overcome a tendency towards shyness so that their behavior is not shy. Similarly, a writer can tend toward procrastination but not actually indulge that tendency on a given writing assignment.

To the extent that procrastination behaviors cause personal distress, it is useful to know what can help people overcome a *tendency* towards procrastination so that they do not engage in procrastination *behaviors*.

In addition to defining terms, it's also important to specify expectations. Only by figuring out what we expect to happen can we determine how best to test those expectations. Here's what we expected:

- Writing center use would be associated with reduced procrastination behavior, higher grades, greater satisfaction, and lower evaluation anxiety.
- Writing center use would be more helpful for those with high procrastination tendency than for those with low procrastination tendency.
- Writers with high procrastination tendency would be less likely to use the writing center, particularly when writing center use was not explicitly required by the instructor.

What We Did

In order to test these expectations, we needed to locate participants and to determine how to assess their procrastination tendencies and behaviors. We recruited participants who had enrolled in writing intensive classes² and/or used our writing center by offering \$10.00 for their time. Most participants were white (67%), female (63%), and first-year college students (69%). They represented all undergraduate levels (17% sophomores, 10% juniors, and 4% seniors), several ethnic backgrounds (including 12% Hispanic, 9% Black, and 7% Asian), and 50 different college majors. Their median age was 18 years. Although we did not attempt to influence participants' writing center use, 61 of them did use the writing center. All 206 participants completed all parts of the study.

Once participants were identified, we asked them to choose an upcoming writing assignment that they considered "major" to use in this study.

Before participants began their major writing assignment, we measured their procrastination tendencies with Solomon and Rothblum's *Procrastination Assessment Scale—Students* (PASS). This 52-item, self-report measure assesses procrastination tendency for six aca-

demographic activities: writing a term paper, studying for exams, keeping up with weekly reading assignments, performing administrative tasks (e.g., filling out forms, registering for classes, getting an ID card), attending meetings (e.g., with an advisor or professor), and participating in general school activities. Participants rate on a 5-point scale (1 = *never procrastinate*; 5 = *always procrastinate*) the extent to which they procrastinate on the task (behavior) and to what degree they consider that procrastination to be a problem (psychological distress). A total procrastination score is calculated from the answers. (For information about the validity of this measure, see Solomon and Rothblum).

After participants had finished their major writing assignment, they completed two more measures: a *Writing Behaviors Assessment* (WBA) and Spielberger's *State-Trait Anxiety Inventory* (STAI).

The *Writing Behaviors Assessment* (WBA), which we designed specifically for this study, asked participants to report their prewriting, writing, and revision behaviors for the major writing assignment they had selected. We organized the answers into 4 different groups, or "scales": Intentions (i.e., when did you intend to write?), Actual Behavior (i.e., when did you actually write?), Satisfaction (i.e., how satisfied were you with the time you started writing?), and Typicality (i.e., how typical was your behavior?)³. (See Appendix for sample WBA questions).

The *State-Trait Anxiety Inventory* (STAI) assesses participants' general tendency to experience anxiety (trait anxiety) and their current level of anxiety (state anxiety). Example items include, "I feel inadequate," and "I am jittery." Participants report the extent to which the items describe them using a 4-point scale from 1 (not at all) to 4 (very much so). To bring the measure closer to the goals of this study, we modified the instructions from "indicate how you feel right now, that is, at this moment" to "indicate how you felt while working on your writing assignment."⁴ (For information about the validity of this measure, see Spielberger.)

After the semester ended, with the permission of the participants, we obtained their major paper grades, course grades in the writing-intensive courses, and overall GPAs. The paper grade was obtained from the course instructor. GPA and course grade were obtained from the university database. In addition, we verified participants' writing center attendance with the center's consultation records.⁵

What We Discovered

When we had gathered all our data, we first calculated some "big picture" findings:

Procrastination was a common problem for these participants. In fact, 38% of participants reported that they "nearly always" or "always" procrastinated on writing a term paper, a finding consistent with other studies (e.g., Solomon and Rothblum). What is more, the

tendency to procrastinate was associated with a variety of negative personal and performance-related consequences. For example, participants who tended to procrastinate overall, and those who tended to procrastinate on writing, reading, and studying specifically, generally earned lower grades in writing-intensive courses. Participants with high writing procrastination tendency experienced greater anxiety (state and trait) and had lower overall GPAs. In addition, participants with high writing procrastination tendency were more likely to write papers later than intended and less likely to be satisfied with their writing process.⁶

Writing center use was not as common as procrastination. Before submitting papers for a grade, 30% of the participants received writing center feedback. Writing center feedback was the third most sought after feedback source, closely following a friend (other than roommate) (42%) and the teacher (32%). However, the overall helpfulness ratings assigned to these sources did not match the frequency that these sources were used. Of those writers who sought feedback from multiple sources, 31% reported that the teacher provided the most helpful responses, while writing center consultants provided the second most helpful responses (22%). Friend (other than roommate) was the most frequently used source of feedback, but it was only the third most helpful (19%).

No type of feedback significantly related to grades. None of the feedback from any sources studied (i.e., roommate, other friend, family member, teacher, writing center consultant, other) was significantly associated with higher overall GPA, course grades, or paper grades. For example, course grade was not higher for those who received writing center feedback than for those who didn't. Likewise, course grade was not higher for those who received teacher feedback than for those who didn't.⁷

Next, we checked to see whether the data supported our specific expectations.

Was writing center use associated with reduced procrastination behavior, higher grades, greater satisfaction, or lower anxiety? To answer this question, we grouped participants into three categories: those who received peer feedback from a writing consultant (30% of the participants), those who received feedback from at least one other source, such as a roommate, friend, family member, or course instructor (52%), and those who did not receive any feedback on their paper prior to turning it in for a grade (17%).⁸

We found that participants who received peer feedback from the writing center and participants who received feedback from other sources started writing their papers significantly earlier than participants who didn't receive feedback. Moreover, participants who received peer feedback from the writing center and those who received feedback from other sources were more satisfied with their writing behavior than participants who didn't receive feedback. However, no differences in grades or anxiety were found.

Thus, our expectation was partly supported by the data: writing center use was associated with two of the positive outcomes we predicted. Writing center use was not associated with higher grades or lower anxiety, but writing center use was associated with higher satisfaction and fewer procrastination behaviors.

Was writing center use more helpful for high procrastinators? To answer this question, we divided the participants into two groups: those who did and did not use the writing center. For each group, we examined the relationship between procrastination tendency and outcomes; then we compared these relationships to see how they differed.⁹

We learned that writing center users generally wrote their papers earlier than they originally intended. Participants with high procrastination tendencies generally wrote their papers later than they originally intended.

We found a significant interaction between writing center use and procrastination. As illustrated by Figure 1, participants with low procrastination tendency wrote their papers early, regardless of whether they received writing center feedback. However, participants with high procrastination tendency wrote their papers early only when they received writing center feedback.

Additionally, we found that writing center use was significantly associated with greater satisfaction with the writing process. As before, writing center use significantly interacted with procrastination. High procrastinators were more satisfied with writing their paper when they did receive writing center feedback than when they didn't receive writing center feedback. This difference was less dramatic for low procrastinators (see Figure 2).

Figure 1: When they had higher procrastination tendencies, writing center users were less likely than non-writing center users to delay writing .

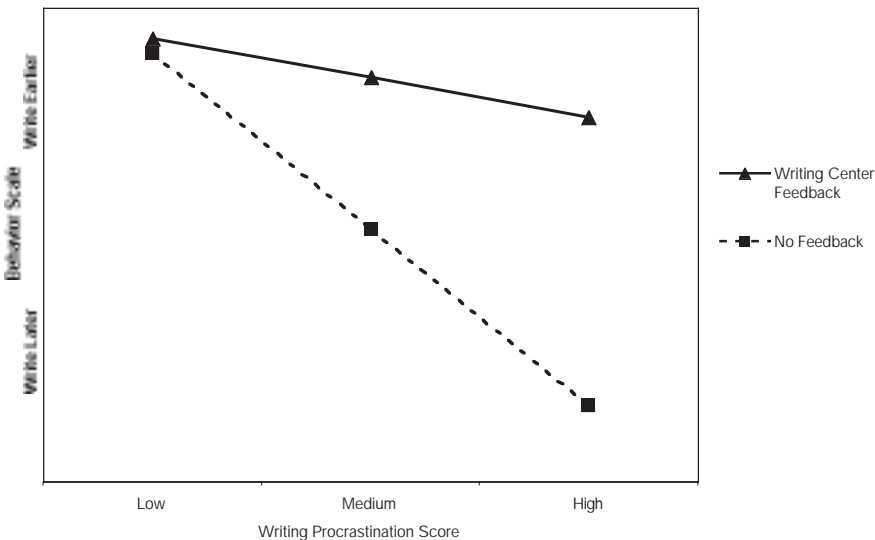
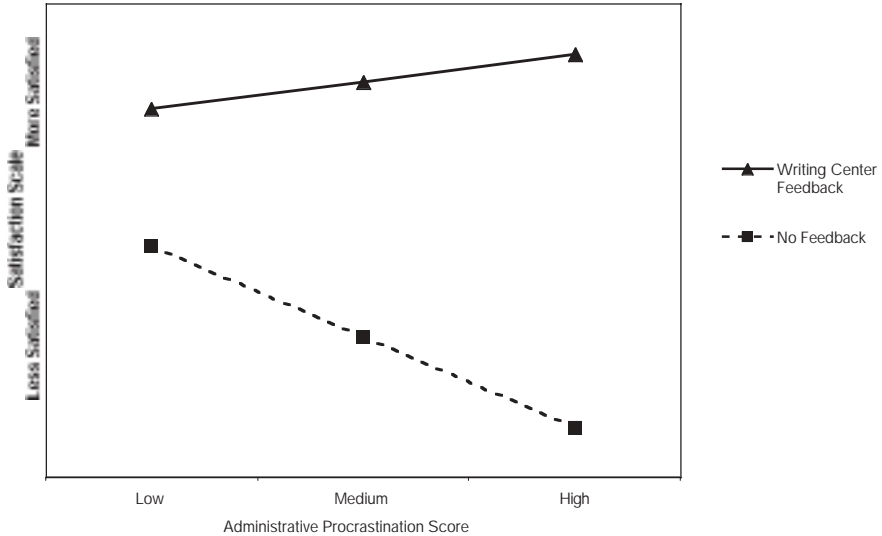


Figure 2: Writing center users--especially those with high procrastination tendency--were more satisfied with their writing process.



Our expectation was therefore wholly supported by the data: writing center use was more helpful for participants with high procrastination tendencies. Writing center use was associated with less procrastination behavior and greater satisfaction with the writing process, particularly for those participants with a high tendency to procrastinate on term papers and administrative tasks.

Do high procrastinators voluntarily use the writing center? To test this expectation, we used the same two groups as before (those who did and did not use the writing center), and we compared the procrastination tendencies of the two groups. Those who did not use the writing center scored significantly higher on administrative procrastination tendency (in other words, they procrastinate on bureaucratic tasks such as filling out forms or registering for class) than those who did use the writing center. In other words, only some high procrastinators were significantly less likely to use the writing center voluntarily.

Next, we compared procrastination tendencies for those whose teachers required writing center use to those who used the writing center voluntarily.¹⁰ We expected that volunteers would have lower procrastination tendencies.

To identify the volunteers, we classified writing center visits as “required” or “not required” based on writing center records. Of the 61 participants who used the writing center, 23 reported that they had been required to do so, 26 had voluntarily done so.¹¹ We found no significant differences in procrastination tendency between the two groups, a finding which was contrary to our expectation.

However, as we were doing that analysis, we came across an unexpected significant correlation: those participants who were required to use the writing center were significantly more likely to report delay behavior. While we had expected differences in procrastination tendency, not delay behavior, we found this result to be interesting, because it suggests there might be some relationship between procrastination and voluntary writing center use, a relationship not pinpointed by procrastination tendency.

Overall, then, the answer to the question, "Do high procrastinators voluntarily use the writing center?" is a partial "yes." Based on the data, most procrastination tendencies have no apparent relationship to voluntary writing center use (with the notable exception of administrative procrastination tendency), even though the writing behaviors of required writing center users were significantly different.

What We Think It All Means

Overall, the results of our study demonstrate that writing center users procrastinate less on their writing.

We were surprised to see the strength of these results because writing behavior is so complex. For example, participants named a wide variety of possible reasons that they typically procrastinate (including "you had a hard time knowing what to include and what not to include in your paper," "you had too many other things to do," "you knew that your classmate hadn't started the paper either," "you waited to see if the professor would give you some more information about the paper"). Yet despite the wide variety of reasons for procrastinating, one straightforward action, using the writing center, was associated with significantly fewer procrastination behaviors.

In fact, just two pieces of information, writing procrastination tendency and writing center attendance, had remarkable predictive power. This ability to predict behavior is ordinarily expressed through a concept called "amount of variance," a familiar concept to anyone who buys car insurance. For example, insurance companies will charge you more if you are a 20-year-old male who drives a Mustang, because those factors predict that you will be prone to accidents. The complexity of most behaviors means that only 9% of variance is typically accounted for (Mischel). By contrast, in our study, writing procrastination tendency and writing center attendance accounted for 20% of the variance. In other words, knowing those two factors alone allows us to correctly predict writing behavior one in five times. Ordinarily, we would expect to correctly predict such a complex behavior fewer than one in ten times.

These results became even more interesting when we considered the type of tasks on which participants tended to procrastinate, particularly writing tasks (such as writing a

term paper) and administrative tasks (such as filling out forms, registering for classes, getting an ID card).

The association between procrastination on writing tasks and seeking peer feedback supports our belief that writing centers help students become better writers. Writing center use virtually erased the behavioral differences between those who tended to procrastinate and those who didn't. Writing center use didn't make much of a difference for writers with low procrastination tendency; these low procrastinators were about as likely to start promptly whether or not they used the writing center. As procrastination tendency increased, however, writing center use made more and more of a difference. The higher a writer's procrastination tendency, the more likely that writing center users would avoid procrastinating.

Not only were writing center users more likely to avoid procrastinating, they were more satisfied with their writing process. Their satisfaction reinforces their good practice, a positive reinforcement with the potential to transform their long-term writing habits.

For writing centers, participants' satisfaction with the writing centers is at least as important as participants' satisfaction with their own writing behaviors. If writers are not satisfied with writing center feedback, they are unlikely to return to the writing center, whether or not their writing behaviors have improved.

Accordingly, when participants received feedback from more than one source, we asked them to rate the usefulness of each source. Participants gave writing center feedback the second highest ranking, second only to teacher feedback. Given that teachers design the writing task and evaluate the final product, we would have been surprised if students considered teacher response to be less helpful. The fact that writing center feedback (in many schools deliberately separated from teacher-student communication) can be rated so highly indicates that participants believe writing center use helped them.

Writing center use was just as helpful as other kinds of feedback (e.g., instructor feedback). And writing centers offer several advantages that other feedback sources do not. First, writing center feedback, as opposed to teacher feedback, is thought to require writers to take more responsibility for their work (Trimbur; Bruffee; Jacoby; Harris). Second, writing center feedback is likely to be more consistent than, say, feedback from a roommate, who may not have the training to offer helpful response. Finally, writing centers are available to all students, as not all students will know someone who can be counted on to give helpful response.

Interestingly, while writing center feedback correlated with satisfaction for high administrative procrastinators (i.e., those who tend to procrastinate on tasks such as filling out

forms, registering for classes, getting id cards), high administrative procrastinators were less likely to use the writing center.

These findings add another layer of complexity to the ongoing debate about whether writing centers should forbid teachers from requiring students to use the writing center. On one hand, insofar as required visits reinforce the perception that writing center use is an unpleasant bureaucratic task, teacher requirements could deter students from using the writing center. On the other hand, if a requirement adds the necessary extra motivation for procrastinators to drag themselves into the writing center, required writing center visits would help writing centers achieve their missions. At the very least, we should stay aware of the ways in which writing center use is similar to administrative tasks such as registering for classes, and we should try to reduce the level of bureaucracy involved with our service.

Although the correlational design of this study cannot determine that the writing center causes improved writing behaviors, all these results support the notion that writing centers help students become better writers.¹²

These results are further bolstered by the design and scope of the study. Not only did we make no attempt to influence participants' decision to seek outside feedback, participants didn't know that we were interested in peer response. Participants who used the writing center could choose to work with any of 53 different peer writing consultants. The consultants were not told which writers scored high in procrastination tendency, or even which writers were participating in the study, so study participants received the same feedback as everyone else.

In the future, we plan to carry out an experimental study that can address the issue of causation. In order to be ethical, that study will use laboratory tasks with no real-world implications. The advantage of our present study over a laboratory experiment is that the present study deals with real-world situations, using real writing assignments, real peer consultations, and real consequences. Thus, participants in our present study were more likely to be engaged in the writing tasks, and these results may be more easily applied to real-world writing contexts.

Further research might usefully examine writing behaviors over a longer period than just one semester/one paper. We don't expect that writing center use would significantly affect anyone's procrastination tendency, because this tendency is considered to be a relatively stable individual difference variable (Solomon and Rothblum). Therefore, those procrastinators who have already used the writing center would probably still identify themselves as procrastinators on the PASS. However, these students' writing behaviors might change. Because writing center users are more satisfied with their writing process,

perhaps as they repeatedly receive writing center feedback, they become increasingly less likely to delay writing. Longer thesis projects offer more opportunities for delay, so research that spans longer periods of time might identify those points in the writing process at which writing center feedback is particularly helpful.

Practical Implications

Even without additional research, this study has important implications for writing center assessment and outreach.

First, writing centers are already helping procrastinators in their normal course of operations. The writing center we studied did not specifically try to “treat” procrastination. The writing consultants received 36 hours of training annually, training which covered many areas beyond writing processes. Consistent with national writing center practice, consultants were taught to distinguish between global and local revision needs, to frame questions that are useful for helping writers improve, to appreciate the ways writing varies across disciplines, and to consider how different writing practices (including practices which help procrastinators, though procrastination isn’t the focus) help different writers.

Not only did the writing center not try to treat procrastination, analysis of writing center records suggests that procrastination was rarely (if ever) explicitly addressed. Only four students indicated main concerns potentially related to procrastination, such as “getting started” or “how to begin,” and none of the records explicitly mentions procrastination.

Writing consultants were unlikely to have mentioned procrastination because more than three-fourths of the writers had already begun their drafts by the time they used the writing center: 17% brought to the writing center only “ideas/questions,” 4% brought “notes/outline,” 20% brought a “partial draft,” and 59% brought a “full-length draft.” This circumstance suggests that the writing center helps procrastinators before they even walk in the door. Let’s say a writer has high procrastination tendency and would ordinarily procrastinate on a particular paper. That writer plans to use the writing center (for whatever reason—required or not). That writer might deliberately begin a draft specifically because of the upcoming writing center appointment. In effect, the writing center appointment itself would provide enough of an incentive to overcome any tendency to procrastinate.

We are encouraged to see that writing centers may already play a role in helping students manage their procrastination tendencies. We hope these results ease the frustration often expressed by writing center staff presented with last-minute drafts.

By informing administrators of these results, writing center directors can enhance their programmatic justification. Typically, the most common empirical measure available to directors is student course grade. Course grades can be troublesome because they are influenced by many factors unconnected to writing, such as attendance or homework assign-

ments. This study empirically measures a likely benefit that is more closely related to writing center goals.

By informing students and teachers that writing center users procrastinate less, writing centers can potentially help more students. Teachers can inform students of these results when telling students about the writing center, and writing centers can include this information in their outreach materials (advertisements, posters, flyers). Often students are aware when procrastination is a problem for them; we can help these students appreciate the writing center as a service that can help save them from night-before-deadline panic.

Acknowledgments

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NOTES

- 1 By "feedback," we mean talk between writer and reader about a piece of writing. Participants might use different words to name this talk, including "response," "critique," "suggestions," "comments," "assistance," "instruction," "proofreading," or "inviting another to participate in the writing process." Because our study did not restrict the sorts of talk carried out between writers and readers, the term "feedback" is meant to include all of these nuances.
- 2 The majority of the participants (73%) were from Gordon Rule courses. Gordon Rule is a designation assigned by the State of Florida to writing-intensive courses. By law, these courses must require students to complete at least 6,000 words of assessed writing during the semester.
- 3 Internal consistency reliability estimates calculated using Cronbach's coefficient alpha were .46 for Intentions, .71 for Typicality, .76 for Satisfaction, and .78 for Actual Behavior. Except for the Intentions scale, these internal consistency estimates suggest moderate reliability.
- 4 While this change could potentially negatively impact reliability and validity, a statistical analysis of the reliability of the measure indicated high internal consistency reliability ($\alpha = .93$).
- 5 Consultation records are completed during a consultation by the consultant and the writer, and the writer receives a completed copy of the record by the end of the consultation. The record indicates, for example, the assignment discussed, the writer's main concerns, the draft the writer supplied (if there was one), and whether or not the visit was required by the course instructor.
- 6 All of the relationships reported here were associated with statistically significant correlations ($p < .05$).
- 7 These results were based on t-test analyses in which alpha was set at .05.
- 8 Data in this paragraph result from one-way ANOVAS in which feedback group was the independent variable and outcome variables (e.g., anxiety) were the dependent variables. Fisher's Least Significant Difference (LSD) tests were used for all post-hoc comparisons.
- 9 To put this in statistical terms, multiple regression analyses were calculated in which outcomes were regressed onto whether or not feedback was received, procrastination ten-

dencies, and the interaction between feedback and procrastination. Finding a significant interaction in the predicted direction supports the hypothesis (Baron and Kenny; Cohen and Cohen). For the interaction terms, we set alpha at .10, the level usually recommended for interpreting even more complicated interactions (Pedhazur), because we wanted to make sure that we didn't overlook potentially interesting findings.

- 10 For this analysis, t tests were calculated (with alpha set at .05) in which "requirement" was the independent variable and "procrastination tendency" was the dependent variable.
- 11 It was unclear from the documentation whether 12 of the participants were required to use the writing center.
- 12 We couldn't determine causation in this study without preventing some participants from using the writing center; because we believed that writing center use would benefit participants, we could not ethically do so.

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Appendix: Sample Questions from the Writing Behaviors Assessment

Writing Behaviors Assessment

University of Central Florida, Orlando

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Beth Rapp Young, Ph.D.

Please complete the Informed Consent form before answering any other questions. You can take as much time as you need to answer the questions below.

1. **Which assignment have you just completed?** _____
2. **Which of the following prewriting activities did you do?** (Circle as many as apply.)
 - a. thinking about assignment
 - b. doing research in library
 - c. talking to friends & family about the assignment
 - d. talking to a teacher about the assignment
 - e. writing ideas/thoughts (not writing a complete draft, but making a list, or an outline, or writing unfocused thoughts for yourself)
 - f. using invention/idea-generating software (such as MindLink or Writer's Helper)
 - g. attending a University Writing Center consultation to generate and/or discuss ideas
 - h. other: _____
3. **When did you INTEND to start prewriting for this assignment?**
 - a. **the same day** you received the assignment
 - b. **1-3 days after** you received the assignment
 - c. **4-7 days after** you received the assignment
 - d. **8-14 days after** you received the assignment
 - e. **15 or more days after** you received the assignment
4. **How soon after you received the assignment did you ACTUALLY start prewriting?**
 - a. much earlier than intended
 - b. slightly earlier than intended
 - c. same as intended
 - d. slightly later than intended
 - e. much later than intended
 - f. didn't prewrite at all
5. **How satisfied are you with the time you started prewriting?**
 - a. extremely satisfied
 - b. somewhat satisfied
 - c. neither satisfied nor dissatisfied
 - d. somewhat dissatisfied
 - e. extremely dissatisfied