

When Nursing Students Write: Changing Attitudes

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There is no shortage of lore circulated among those involved in writing-across-the curriculum programs. Practitioners talk of students saved and reformed, for example, but their enthusiasm is usually born more of hope and faith than of fact and reason. This is not to say that the stories are specious or untrue, only that in most cases they lack verification by a recognized means of assessment.

The shortage of formal evaluation of WAC programs is not surprising. As Sarah Freedman points out in "Evaluating Writing," an entirely satisfactory method of determining the effectiveness of instruction either by large-scale testing or classroom assessment is yet to be found. Some efforts have yielded interesting results. For example, in a study of the composite effects of taking three or more writing-intensive classes at the University of Hawaii at Manoa, Hilgers, Bayer, Bergh, and Taniguchi interviewed 82 randomly selected seniors, 83% of whom reported that WI classes helped them understand and retain course material (71). Despite such positive responses, the researchers refrain from making claims of any direct evidence of connections between the WI instructions and students' learning. Because they did not make classroom observations or take samples of student writing, they are reluctant to conclude that students who have had writing-intensive classes recall and comprehend course material better than those who have not (78).

Identifying the causes of improved student attitudes and performance is equally difficult. Identifying, isolating, and defining the reasons for attitudinal improvement is fraught with problems, and the degree to which they impact student work is even more resistant to measurement. The result is that teachers tend to use anecdotal rather than statistical evidence to verify the positive effects of using writing to

assist learning. They often draw conclusions based on their own well-honed sense of the situation.

This study, a culmination of three years of attempting to determine the effect of using writing-to-learn strategies in freshman nursing classes, did not replace all of the available lore. It did not even provide answers to all the questions the researchers set out to find. The quantification they sought about the impact of writing to learn on student mastery of course material, for example, remained elusive. Whether students thought more critically and analytically about their future profession after writing about its issues and concerns could not be verified. Like other researchers who have sought to evaluate the success of specific pedagogies, such as Ruie Jane Pritchard (“Effect on Student Writing of Teacher Training in the National Writing Project Model”), they found that drawing valid conclusions from situations filled with variables—i.e., classrooms, is exceedingly difficult.

The three-year study did, however, confirm several significant effects of using writing-to-learn techniques in the nursing classroom. Specifically, it provided evidence of three areas of positive impact: (1) improved student attitudes towards writing and learning, (2) strengthened student-teacher communication, and (3) increased student retention. As a result, the findings create a strong rationale for including writing to learn in the freshman nursing curriculum, and perhaps for instituting it throughout the entire nursing program.

Research Methods

The initial stages of the study were the result of a collaborative effort on the part of the instructor of Nursing 114, a required second semester freshman course, the head of the undergraduate nursing program, and the university’s WAC director. Working together, they chose and designed writing activities deemed likely to have a positive effect on students’ personal involvement in subject matter, data comprehension, and critical thinking. In the end they selected eleven different interventions, including admit and exit slips, micro-themes, listing, brainstorming, free writing, comparisons, focused writings, buddy exchanges, unsent letters, and responses to dramatic scenarios. In an effort to improve students’ critical thinking, ample time was provided to complete each exercise. As Freedman points out, “higher-order thinking occurs when there is an increased focus on a writing process which includes encouraging students to take lots of time with their writing, to think deeply and write about issues in which they feel some investment . . . (“Evaluating Writing” 4).

The use of specific strategies was dictated by the objectives of the lessons(s) of the class on a given day. For example, when studying community health, students were asked to respond to a hypothetical letter from a disadvantaged caregiver inquiring about wound care procedures that broke all rules of asepsis. To answer, students were called upon to present complex knowledge about practical application of wound care in simple lay terms. They had not only to use their technical knowledge, but also to exercise an understanding of members of the community. To develop a sense of professionalism, they were asked on another occasion to do focused writing (timed, non-stop writing on a specific topic) on such issues as the meaning of health, ways in which nurses demonstrate ethical codes of behavior in practice, or the use of self in establishing therapeutic nurse-client relationships. By limiting the length of the response to the information that could be recorded on a 5x8-inch card, the instructor pushed students to clarify their thinking about important and difficult issues in their field.

Evaluation was designed to assess changes produced by the interventions, particularly as they affected students' attitudes and academic success. (As noted earlier, the former proved more amenable to measurement.) The instruments included a Writing To Learn Attitudinal Survey (WTLAS) [See Appendix 1] administered in a pretest-posttest design, scheduled interviews, and final course grades. (The WTLAS survey was based on other similar surveys, classroom writing histories, and Daly & Miller's [1975] writing apprehension test.)

Following the explanation of the project and collection of consent forms on the first day of the course, the Writing To Learn Attitudinal Survey was administered as a pretest to the 131 students enrolled in Nursing 114. In eleven class meetings throughout the remainder of the semester, the nursing instructor presented writing-to-learn activities appropriate for course unit objectives that dealt with concepts such as nursing trends, socialization and roles, research, politics, theories of nursing, health and illness, health care delivery systems, ethical and legal issues, nursing process, growth and development, stress and adaptation, and grief, loss, and death. On the last day of class, the same Writing To Learn Attitudinal Survey was administered as a posttest to all participating students.

Two weeks before the end of the semester, a disinterested instructor (not previously involved in the study) conducted twenty-minute interviews with twenty students who volunteered as representatives of the sample population. Questions were designed to elicit responses

about student acceptance of the writing strategies—e.g., whether they were used in other courses, how well they were understood, if they were deemed to be helpful, etc. The answers were taped and transcribed (using no names) by the interviewer.

At the end of the term, data analysis included use of the paired t-test ($\alpha = .05$) for the WTLAS. Interviews were interpreted. In addition, final course grades were examined to compare the course attrition rate with that of the previous semester's class.

Findings

The paired t-test was used to determine the significance of differences between pretest and posttest scores on the Writing To Learn Attitudinal Survey. Examination of the data revealed that students responded more positively to the statements on the WTLAS as a posttest—i.e., after they had received writing-to-learn educational interventions, than they did as a pretest. The scores on the pretest and posttest were significantly different ($t = 9.17, p = .0001$).

At the time of the pre-test, thirty-six percent (36%) were uncertain as to whether impromptu focused writing in class helped them to solve problems or clarify concepts, whereas forty-three percent (43%) agreed by the post-test that it did. Forty-five percent (45%) of the students on the pre-test admitted having feelings of nervousness when asked to write as compared to thirty-six percent (36%) at post-test time.

In all three phases of this investigation the WTLAS provided an easy and reliable means of collecting and describing student attitudes about writing. Consisting of nine (9) negative and twenty-one (21) positive statements about writing, it was designed to cover basic psychosocial apprehensions and positive and negative perceptions about writing. During all pretests of the first and second years' study and the pre-and-post-test sessions of the third, it demonstrated the same positive and negative attitudes and perceptions held by students about writing. When used in a pre-test-and-post-test design, the WTLAS provided a means for categorizing data in terms of positive and negative differences in attitudes and perceptions about writing. Having demonstrated its validity in these ways, the WTLAS could be used by other researchers to compare levels of information about the writing attitudes of different groups, identify negative perceptions and attitudes, determine the effects of courses or training materials, and measure changes in attitudes over time.

The interviews, different from the WTLAS in form, content, and administration, provided complementary information. Yielding generally positive responses, they provided subjective confirmation that the statistical data of the WTLAS were valid. They also provided material not available in the Attitudinal Survey. For example, the interviewer, without expressing an opinion of any sort, asked the volunteer students to talk about such questions as the following:

1. Do you feel the in-class writing exercises have helped you to understand the course content? How and why?
2. Which exercises were the most helpful in understanding course material? Cite an example of a successful writing experience.
3. Comment on the following statement: "Writing is necessary for success."
4. Do you use any writing strategies in other courses? If so, which ones?
5. How will your experiences with writing in this course help you in other courses?
6. Which writing exercises were the least helpful ones?
7. What are your attitudes now about writing as opposed to your attitudes at the beginning of the course?
8. What differences have you observed between making objective responses and extended written ones?

In answer, the students indicated that they found writing to assist learning. They had positive feelings about the writing experiences in class and deemed writing skills to be necessary for success. (See Figure 1 for selected student comments to the interview questions.) The responses agreed with the findings of Hilger et al, whose interviews (with seniors who had had three or more WI classes) found that 89% of the interviews perceived that these classes had helped to prepare them for future career writing tasks (73).

A third way of evaluating the impact of the writing activities on students' attitudes and academic success was to make a comparison of the attrition rate of the experimental group and that of another section of the same course taught without the interventions. The comparison, like the WTLAS and the interviews, confirmed that writing had had a positive effect on student performance. In fact, it yielded what was probably the most dramatic evidence of the positive influence of writing activities found in the third study. Confirming the data collected in earlier stages of the research, the attrition rate for the writing intensive

QUESTION #1: Did the in-class writing exercises help you to learn course content? How and why?

- opens up one on one communication between teacher/student
- gives you release, a place to ask questions
- did not learn as much from "buddy answers"
- did show students that they shared common concerns
- helped to generate ideas
- no, because based on opinion rather than fact

QUESTION #2: Which exercises were the most helpful in understanding course material? Cite an example.

- finding your own community of resources
- writing your own philosophy
- buddy assignment
- agency assignment
- hearing other students
- in answering, sends one back to the textbook

QUESTION #3: Comment on the following: "Writing is necessary for success."

- writing expresses feelings, "get it out"
- putting questions on paper makes you think
- by writing, you start to understand your own mind
- increases organizational skills
- helps one to further generate ideas
- if you can't communicate on paper, it may be a problem

QUESTION #5: How will your experiences with writing in this course help you in other courses?

- increase strategies in essay biology tests
- getting in the routine of writing and formally putting down your ideas will help you generate ideas
- brainstorm in English

QUESTION #7: What are your attitudes now about writing as opposed to your attitudes at the beginning of the course?

- worried that intense writing course would be time consuming—luckily it wasn't
- important to be able to organize your ideas and opinions
- because it wasn't graded, I had a more positive experience
- I didn't panic when teacher said to get out piece of paper
- liked to write about topics they knew about
- feel like writing in English is unrelated to their major, but that this writing related to current issues in the nursing profession

QUESTION #8: What differences have you observed between making objective responses and extended written ones?

- essay—you can expand on the little you do know instead of having to know everything
- I like to be able to give the accurate answer—if you say what you know, its more beneficial than A, B, C
- prefer essay and writing exams because I got to write down everything I know, everything I learned
- objective responses are just “this one” or “that one”
- in the process of writing, you find out what you know
- a better way of testing students—instructors know what students know based on what students write

Figure 1: Selected responses to interview questions

classes ran at twenty-seven percent (27%) as compared to forty-nine percent (49%) in a section of the same course taught in the traditional manner. While attrition has many causes—e.g., work schedules, teacher-student conflicts, and family emergencies, the higher retention rates of the classes using writing in all three years of the study point strongly to its positive influence.

Several aspects of the writing program may have influenced the higher retention rates. The improved student attitudes, for example, may have encouraged students to remain in the course, and, ultimately, perhaps, to stay in the curriculum. Another factor could be the involvement called for by the activities described earlier. By becoming an active participant in their own learning through frequent writing, students may have acquired better understanding and more complete

recall of newly learned material as well as improved comprehension of theory and process. As Harvard researchers discovered:

[T]he relationship between the amount of writing for a course and students' level of engagement—whether engagement is measured by time spent on the course, or the intellectual challenge it presents, or students' self-reported level of interest in it—is stronger than any relationship we found between student engagement and any other course characteristic. (Light qtd. in Hilgers et al.)

The instructor's approach to student writing also seems to have been a positive force. Although she did not grade the writing-to-learn assignments, within a week she responded to each student's work with positive suggestions or reinforcement that related the individual's performance to a desired goal or course objective. As Freedman points out in *Response to Student Writing*, timely response from the instructor is more important in helping students learn to "think deeply about their experiences and communicate those experiences to others" (157-9), than is grading. The secondary, but no less valuable result of the instructor's responses was the improvement in student-teacher communication. The instructor had information that allowed her to understand the learning level of the class as a whole, as well as a way to know individual students. In a traditional lecture class of 131 students, needless to say, neither of these desirable outcomes is likely to occur.

In addition, the variety of assignments gave students opportunities to exercise a number of different types of thinking—defining, problem solving, analysis, evaluating, and others. The nursing students described micro-themes, listing, brainstorming, free writing, and comparisons to be particularly effective in helping them to master course content and develop personal insights.

Future Research

Many questions remain to be answered about the effectiveness of using writing-to-learn activities in technical disciplines. Do the students who begin their study of nursing (or chemistry or biology) in a writing intensive course continue to use the techniques it introduces them to? Are they in the long run more successful than their counterparts who are not given such strategies? Will similar results be found in other scientific and technical fields?

The three-year evaluative study reported here is only a beginning, but its findings can form a basis for future inquiries. To that end, it has

found that intense incorporation of writing-to-learn strategies in a required introductory nursing course helps students who begin with negative attitudes about writing to become more positive. It indicates that using writing strategies strengthens student-teacher communication, and helps to lower attrition rates. With better tools to measure the impact of writing-to-learn in nursing and other classrooms, a more definitive answer will in time emerge. So far, however, a limited number of positive outcomes can be identified that may have a ripple effect on other aspects of student learning and thinking.

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Appendix 1: WTLAS Test

The College of Nursing is trying to determine the effectiveness of using writing to improve student learning and success. Would you please complete the following survey to help us gather information that will be important in designing courses for other students?

NAME:

STUDENT ID NUMBER:

COURSE:

DATE:

Below are a series of statements about writing. There are no right or wrong answers to these statements. Please indicate the degree to which each statement applies to you by marking the appropriate number on the Scantron form with a pencil as follows: (1) strongly agree, (2) agree, (3) uncertain, (4) disagree, or (5) strongly disagree with the statement. While some of these statements may seem repetitious, take your time and try to be as honest as possible.

STRONGLY AGREE AGREE UNCERTAIN DISAGREE STRONGLY DISAGREE
 1 2 3 4 5

1. Expressing ideas through writing seems to be a waste of time.
2. Impromptu focused writing in class helps me to solve problems or clarify concepts.
3. I get nervous when I am asked to write.
4. Handing in written questions about lectures and reading assignments helps me understand course material.
5. I like to write my ideas down.
6. I feel confident in my ability to express my ideas clearly in writing.
7. Informal notes and letters to classmates about course material help me to understand difficult material.
8. I enjoy writing.
9. Brainstorming, freewriting, or listing ideas before writing helps me find out what I know and think about a topic.
10. I have a terrible time organizing my ideas in writing.
11. Admit slips make it easier to begin thinking about what will be covered in a class.
12. I like seeing my thoughts on paper.
13. I avoid writing if possible.

14. I would enjoy submitting my writing to magazines for evaluation and publication.
15. I like to have my friends read what I have written.
16. I never seem to be able to write my ideas down clearly.
17. Writing micro-themes (brief summaries) makes me aware of the most important points in reading assignments.
18. I don't think I write as well as most people.
19. Critiquing a classmate's writing for conceptual clarity results in increased understanding for both of us.
20. Writing personal experience pieces makes me see connections between what I am learning and my own life.
21. I'm no good at writing.
22. Writing to different audiences makes me aware of how much the reader or listener affects the way I state information and concepts.
23. Good writers make better grades in college than poor writers.
24. It's easy for me to express my ideas in writing.
25. The technical aspects of writing (punctuation, spelling, etc.) are more important than other aspects (concept formulation, clarity, etc.).
26. I don't like my writing to be evaluated.
27. Writing skills are necessary for success.
28. Exit slips help me to remember the main points covered in a class.
29. Discussing my writing with others is an enjoyable experience.
30. I use journals to enhance my understanding of course materials.