Assimilating Intensive Writing into Respiratory Therapy Instruction: One Baccalaureate Program's Experience

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ABSTRACT
Writing is an important tool in the process of learning and communication. Many universities across the United States recognize the importance of implementing writing into respective learning disciplines through a number of approaches. A respiratory therapy program at a large urban university recently assimilated a writing intensive course into their baccalaureate curriculum over a two-year period. A faculty member and a graduate teaching assistant planned as co-instructors various writing assignments that would incorporate writing as an activity to promote critical thinking and learning. The instructors made a dedicated effort to improve professional communication skills through various writing-to-learn strategies and observed the students appreciating an opportunity to be creative.

INTRODUCTION
Writing is an important tool for communication and an inherent part of learning. In broadly based pedagogical practice, the assumption is that writing is at the center of the academic experience in all disciplines. Traditionally, writing in universities and colleges has been limited to English composition classes. Faculty members in professional programs tend to believe that the time allotted for teaching in their disciplines is already insufficient and that writing is an unwanted additional duty. So how can we in allied health education encourage and promote writing in our curriculums?

Writing Across the Curriculum (WAC) is one such program that has incorporated writing through various forms in college-level courses. It is based on the principle of writing-to-learn (WTL) and students do write more than in a traditional class. WTL can be defined as the process of developing expressive skills that are useful in discovering, processing, and analyzing information through language.[1] The WAC method encourages sequenced writing assignments that builds bridges between formal and informal types of communication, during the teaching-learning process. Writing stimulates the thinking process and in effect also helps improve the communication process.[1] The goal of WAC is not to eradicate the problems of poor writers, but to foster the development of critical thinking strategies.[2] Ultimately, a WAC program can improve literacy and intellectual capacity across the board, thus helping students to be more competent and equipped with better writing skills when they enter their respective professional fields.[3] WAC's basic premise is that writing plays a vital part in learning no matter what the subject matter.

WTL and writing in the disciplines are two related activities influencing each other greatly. While WTL stimulates discovery thinking, writing in a discipline targets critical thinking.[4,5] Writing in the discipline acknowledges the benefits of an expert in the field teaching writing techniques because various fields involve different writing styles and requirements. Classes within a given discipline can have numerous writing assignments and the expert/instructor provides feedback on the writing to improve

professional communication. Through the formality of writing and editing, writers can learn to differentiate concepts that they understand from those not fully understood.

A review of the literature offered only a few strategies for writing and reflection in nursing and allied health.[6-9] No articles were found for respiratory therapy education. In this article, a brief overview of how writing was developed and assimilated in an undergraduate respiratory therapy course will be presented, some of the lessons learned will be discussed, and writing strategies to encourage learning and critical thinking will be provided.

HISTORY OF WAC

WAC programs were conceptualized and developed in England in the 1960s and 1970s as a language for learning movement. In the 1970s many American universities and colleges were criticized for poor verbal scores of students on standardized tests. The industry and business world expressed their dissatisfaction over the inept literacy skills of the graduates. Thus to meet these challenges, WAC programs were started in the mid 1970s in colleges and universities in the U.S. These programs began very slowly in the beginning but with increased government and corporate funding, they continue to grow and develop today.[4,10]

WAC programs are not new to healthcare education. Writing assignments were developed as a core of two undergraduate nursing courses at a mid-western university.[6] Researchers evaluated the program across two years and observed an improvement in the reflective practice and critical thinking among the students. They also observed an increase in the willingness of the faculty to integrate writing in clinical education and a satisfaction among the faculty as the students not only learned the practical skills but also evaluated them critically. However, it is not always easy to implement intensive writing in clinical fields like nursing as many students disregard the importance of writing in clinical practice.[7] Although the implementation of a two year WAC program in the nursing department did face numerous challenges in the beginning, a sense of improvement in teaching skills was felt by the faculty and an improvement in the skills and outlook of students as professionals was observed at the end of two years. A WAC program and critical reading have also been implemented successfully in a clinical laboratory science curriculum with a focus on WTL activities.[8]

In 1995, a WAC program was approved by this large urban university and has since been instituted in various disciplines across the University. The purpose of the program was to integrate WTL into the courses, initiate clear thinking, aid in organization and presentation of thoughts, and thus improve communication skills of the students.[3] The goal of the program was to enhance the marketability of the university's graduates by improving their knowledge and increasing their communication skills. If a person can explain in writing how something works, or how to do something, then he or she is perceived to understand the concepts and processes involved. Therefore, better-prepared students have an advantage in their respective professions.

IMPLEMENTATION

The Respiratory Therapy Department incorporated these principles into their curriculum in Spring semester 2002 by designating a senior level capstone course called "Trends and Professional Issues in Respiratory Care" as a Writing Intensive (WI) course. The WAC Standing Committee approved the course as WI because the course focused on writing assignments both in and out of class and a substantial percentage of the grade was based on these assignments. This was a mini-mester course (seven weeks) taught to the seniors who were graduating from the program the same semester. The primary objective of this course was to enable students to begin to think of themselves as practicing respiratory therapists. Funding was obtained in 2001 for the assigned instructor to attend a faculty workshop sponsored by the English Department and also for a graduate teaching assistant (GTA). The instructor was asked to secure a graduate student who was familiar with the respiratory care profession. A graduate physical therapy student was interviewed and employed for a two-year term to assist in assimilating WTL into the curriculum. This WI course has been taught twice now, both times during Spring semester in 2002 and in 2003.

The GTA was introduced to the respiratory therapy students at the beginning of the WI course as she attended all class sessions. The GTA responsibilities included assisting students with difficulty in writing, structuring papers and use of reference/ citation styles for their papers. Apart from the class hours, the GTA also held office hours twice a week during which the students were encouraged to meet and solve their difficulties. The students were also informed about the online and on-campus resources available i.e., the writing lab conducted by the English Department.

The instructor and GTA taught the capstone course as co-facilitators. The class was composed of graduating seniors with the course objectives focusing on various professional issues and improving communication skills for entry into the respiratory therapy profession. Various writing assignments were developed to enhance the learning opportunities for students both in and out of class assignments for which the students were awarded a total of 500 points. There were five in-class writing assignments

worth 50 points each. Examples of these assignments included writing a paragraph during the last 10 minutes of class on professional organizations related to respiratory care, writing a paragraph at the beginning of class stating why they entered the profession, and their thoughts on a particular topic discussed during the class. The rationale of these short-writing assignments was to have the students reflect on a lecture previously presented so that any gaps in their understanding of the content could be seen.

During the seven weeks, the students were shown two 20-minute videos; one on end-of-life matters regarding terminally ill patients and the other on prolonging life support for an infant with multiple birth deformities. At the end of each video the students were assigned to write on their viewpoints. The aim of these assignments was to stimulate critical thinking and brainstorming as the writings were short (one completed in class at the end of the video and the other as an overnight homework assignment). The students were encouraged to be creative and to use humor as appropriate. Table 1 includes two examples of student writings in poetry form to express their final healthcare wishes in the aftermath of an unfortunate catastrophic occurrence.

Table 1. Two examples of student writings.

Assignment was to write a poem on one's last wishes. The first two lines were provided.

A. My Last Wishes	B. My Last Wishes
As I go round and round the bowl,	As I go round and round the bowl
My last wishes before I go down the hole	My last wishes before I go down the hole,
Are for you to turn off these artificial lights,	Is to still have my dignity and respect
Stop all this watering and constant care	And to not be looked upon as a big fat insurance check
My leaves have withered and my soil is dry	By all means don't serve me hospital food
For my time is up and I am ready to go,	Instead bring a blender and serve my favorite down my NG tube
So put me on the porch and let nature take its course.	And make sure my nurse gives me good mouth care
	And daily facials and combs my hair
	This way when I get uptown
	I'll be looking as good as everyone around
	No need to prolong my agony unnecessarily
	Just give me lots of morphine and let me go merrily
	Smile while you're fulfilling my last wishes
	And give everyone I love hugs and kisses
	Let my funeral be a celebration
	Of a good life lived with no reservations!

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Other forms of writing were also assigned such as writing a resume for a prospective employer, a take home mid-term and final exam, which were in an essay format, and preparing a brochure to promote good respiratory health. Each out-of-class writing assignment was worth 100 points and the take-home final exam was worth 200 points. Fifty points were awarded for class participation and attendance.

Apart from the in-class sessions, the course was made available to the students through WebCT, an online course management tool that allows the faculty and students to make course related information accessible through a web based educational environment. The instructor posted the course syllabus, grading criteria and class presentations on WebCT. The students were also encouraged to send their assignments via email to the WebCT mailbox. In another use of technology, the instructors experimented with the online grading system using the "track changes" feature in Microsoft Word.TM The corrected paper was then sent back to the student via email. This process was found to be timesaving and extremely easy.

The grading criteria were outlined on the syllabus, explained to the students at the beginning of the course, and restated again before assigning the writing tasks. They were encouraged to be creative in their work. The university policy on plagiarism was also provided and made clear that it would result in serious consequences. Concentration on spelling and grammar were emphasized as essential aspects to writing clearly for understanding and learning. The GTA would read the assignments first for spelling and grammar, as well as style, and the respiratory therapy instructor evaluated content. The instructors limited their comments on the papers to a minimum as it was thought that since these assignments were aimed towards learning, it was essential not to discourage the students. The GTA did not mark any comments on the student papers, instead, comments were written on a post-it to avoid confusion between the comments of the GTA and instructor. The respiratory therapy instructor assigned the overall grade of the writing task. Some assignments were graded while others were simply passed to the student across the aisle to discuss as peers. The students were instructed on the process of peer-review such that they could focus only on the thoughts and opinions of their peers on certain issues discussed in the writings and avoid deviation from the purpose of peer review. The students did not know which writings were to be handed in for a grade and which were to be used for discussion only. For those assignments graded, revisions were allowed and even encouraged to improve the student's explanation and analysis of the writing assignment. This was done because research on writing indicates that students learn the best when they revise their writing using feedback.3

EVALUATION AND LESSONS LEARNED

Overall, both students and instructors were pleased with the course. Formal student's course evaluations over the two-year period were not helpful in evaluating the course. In the first year, the students were given the evaluations to do in class without the instructors present and a class member gathered the forms for the appropriate office. In the second year the university went to an on-line course evaluation system and students were asked to complete their evaluation during the last week of class. The responses were 11 of 22 students for a 50% return in year 1 and 0 response in year 2. The ratings of year one of the instructor and course were 3.6/3.5 respectively in year 1 on a 4-point scale. Qualitative comments in year one included a suggestion to better spread the homework assignments and one student stated that there were too many writing assignments. The instructor felt that the quality of the writings from the students was very good considering this was the first time a writing designated course was emphasized.

In an attempt to solicit feedback from the students to evaluate the effectiveness of assimilating writing into the course, an optional question on the final exam in year two asked the students to provide an assessment of the course. This question, "In your opinion should this class be a required course and share any thoughts on the subjects and content covered, delivery of materials and the effectiveness of the instructors," proved to be a popular question to answer with 72% of students responding. Excerpts of their opinions are listed in Table 2.

Table 2. Examples of student's opinions in evaluating the effectiveness of a writing intensive course.

#1. This course came off as a writing course similar to English 101. I do believe that being able to write is an essential part and skill that a graduate should have, however, I feel that we develop that skill in our general education classes and should not have to relearn or practice in this class. I think that class should have more discussion. The free writing or creative writing was a positive feature in this class, but out of class writing assignments made the class too much like English 101.

#2. My first impression upon signing up for the class was that I would be writing for two hours a day for eight weeks on topics not necessarily related to respiratory therapy. Being a science major and not an avid writer, the thought of writing for such as extensive period of time was rather overwhelming. I was nicely surprised however when I found our that the class would be covering topics related to several aspects of healthcare. Further more, the formats in which writing assignments were presented gave me the opportunity to somewhat elaborate on the material just covered and critically evaluate some major healthcare issues.

#3. I thought it was a great idea for you to tell us to write a poem on dying wishes. You turned a sensitive subject into a funny subject. The poems the students wrote were amazing and very creative it was interesting to listen to all of them. The one positive thing about this class is you make us write about our feelings about the different subjects. Even though sometimes it's hard to write papers it makes you think about life and reality.

#4. I felt we learned what we needed to learn and did not feel that we had too much to learn. I did like writing in class for 15 minutes just to reemphasize what we had preciously learned. I gained a better fell for the subject especially since the instructor read over it and could correct what we had misunderstood.

#5. Overall I think the course should be required, however just shorten the class time a little. The material covered was informative and specific to our profession. The delivery of the material was okay. Having us write a summary of our thoughts of what was covered in class was a good idea. It allowed us to express our personal thoughts and feelings about the various subjects.

#6. The homework assignments were applicable. I also think that the length for each assignment was appropriate. However, I do not think I benefited from the in-class writing assignments due to the fact that they were short and we were unable to put a great deal of thought into them. Writing is a skill that we need to reinforce. We have not had to write anything extensive in the past year and a half and I did not see any profit from writing during class.

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Cowles et al.,[6] suggested that it might be necessary to blend the writing assignments with the course objectives and design them in a manner that the students perceive as being meaningful and useful in the process of learning. This was found this to be true and the varied use of non-traditional teaching methods and assignments was well received by the students. In fact, they seemed to welcome the opportunity to be imaginative and artistic in their assignments as opposed to the machine graded multiple-choice exams given in other courses. Finally, the instructors were very impressed with the creativeness of the students and their ability to express themselves in the written form. The most popular time in class was before returning graded papers when the instructor would read aloud anonymously several poems and memos. This actually generated some excitement for writing and rewarded those who took the writing assignments seriously.

WRITING STRATEGIES AND OVERCOMING BARRIERS
The use of multiple short in-class writings was observed not only to improve the thinking and thought compilation process but also provided the practice necessary to improve writing. It was viewed as an essential tool in developing writing skills. Brainstorming was another process that was employed with the short writing exercise. This process could be used by the students especially in composing long papers. Noting down thoughts as they come to the mind is particularly helpful as the chances of missing a particular point are reduced. The writing can then be revised several times before submitting the final paper. This process greatly improves the quality of the papers submitted. Sequencing writing assignments stimulates thinking in an organized manner to improve the composition of thoughts thus improving the overall writing skills.[6]

Many faculty members in clinical sciences hesitate to integrate writing assignments in their courses, as they are viewed as not only tedious to read and grade but also irrelevant in clinical practice. They may not perceive implementation of writing to be a personal responsibility as educators or may simply feel incompetent to grade the writing assignments.[6,8] However, lessons

learned from incorporating WAC into this respiratory therapy baccalaureate program was that no unreasonable amount of additional time was required to process papers. Neither the GTA nor lead instructor had to be a grammar expert to teach writing. The point of whether to comment on each error in the paper has been long debated in the academic circles. Teachers sometimes tend to be overly critical and scornful of student writings. Marking all the surface errors not only makes the process of grading lengthy but also irritating. It also tends to create an overload of information and possible confusion in the minds of the students.[11] It was observed that providing the students a clear explanation of expectations before the assignments improved the quality of writing and reduced marking on the papers during grading by the end of the course. By understanding the expected style of writing and paying attention to the quality of writing, the students could easily focus on the content of the papers. It was felt that along with negative comments it was necessary to provide positive comments on innovative ideas and thought compositions so that the students were motivated to improve their writing in the following assignments. Positive feedback was also helpful in maintaining the interests of students. While returning the graded papers back to the students, the instructors pointed out certain commonly seen errors in the writings of the class in general. This was found to be an efficient method of providing feedback.

The use of peer-review method for one or two of the in-class writing assignments was particularly useful as the students provided comments/suggestions to each other on improving their writing. It was observed that students act as better proofreaders while reviewing their peers rather than their own writings. It also stimulated a healthy discussion on a few controversial topics promoting critical reflection and understanding.

Using WebCT in the course was viewed to be particularly helpful as it was easy to disseminate course information to the students. Both the instructors had faculty access to the WebCT account thereby reducing any confusion among the students in sending assignments electronically. WebCT made it easier to respond to any questions from the students as access to WebCT could be obtained from virtually any computer on campus. Similarly, the instructors found the online grading method to be particularly efficient as quick feedback could be provided. It allowed the instructor to view and grade the paper from any computer having Microsoft Word.™ Overall, the use of innovative educational technology in the form of WebCT was found to cut down the burden of printing reams of paper to distribute information to the class and thus in several ways proved to be timesaving.

SUMMARY

In Spring 2002, the faculty of an undergraduate respiratory therapy program made a concerted effort to integrate WAC into the curriculum in response to interests internal to the university. The incentive to do so, apart from the satisfaction of using innovative pedagogical strategies and creating a valuable learning experience, included possible recognition by the University for teaching excellence, and improved support and training for teaching assistantships. Several benefits were recognized from this experience that included an improvement in the students' awareness of writing and making them critical consumers of the information being taught. Apart from promoting creativity, a dedicated effort was made to improve professional communication skills among the new respiratory therapy graduates.

Following the experience in this particular capstone course, other respiratory therapy instructors began assimilating writing into their courses. The faculty now acknowledges that incorporating writing assignments into the content positively enhances learning opportunities. It is believed that if a student can communicate effectively, he or she will have a distinct edge on others in any environment, corporate or academic. For further information on WAC programs at colleges and universities across the US, the web sites for these programs are listed in Appendix A. These listings are not inclusive but are provided as examples of how WAC programs are tailored to meet the needs of their faculty and students.

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Appendix A

For Further Information
WAC Programs at Other Universities

American University http://www.american.edu/academic.depts/cas/lit/writeweb.htm	Amherst College http://www.amherst.edu/~writing/
Boise State University http://www.boisestate.edu/wcenter/owl.htm	Bowdoin College http://academic.bowdoin.edu/writing_project
California State University - Los Angeles http://web.calstatela.edu/centers/write_cn/index.htm	Colorado State University http://aw.colostate.edu/index.html
The Citadel http://www.citadel.edu/citadel/otherserv/wctr/	Cornell University http://www.arts.cornell.edu/knight_institute
Dartmouth College http://www.dartmouth.edu/~compose/	East Tennessee State University http://www.etsu.edu/writing/
Eastern Illinois University http://www.eiu.edu/%7Ewriting/	Eastern Washington University http://www.ewu.edu/StudentServ/writers/
George Mason University http://wac.gmu.edu/	Georgetown University http://www.georgetown.edu/departments/english/writing/writprog.htm
Harvard University http://www.fas.harvard.edu/~wricntr/	Indiana University - Bloomington http://www.indiana.edu/~cwp/
Iowa State AgComm http://www.ag.iastate.edu/grants/strategies.html	Kapiolani Community College http://leahi.kcc.hawaii.edu/org/wac/
Malaspina University-College http://www.mala.bc.ca/www/wac/proj.htm	Marshall University http://www.marshall.edu/wac/
Maryland Community College Consortium for Teaching Reasoning http://academic.pg.cc.md.us/~wpeirce/MCCCTR/	Massachusetts Institute of Technology http://web.mit.edu/writing/writereg/
Northern Illinois University http://www.engl.niu.edu/wac/	Princeton University http://webware.princeton.edu/Writing/
Purdue University http://owl.english.purdue.edu/	Rice University http://www.ruf.rice.edu/~riceowl/
Samford University http://www.samford.edu/schools/artsci/english/wac.htm	Swarthmore College http://www.swarthmore.edu/Humanities/wa/
Temple University http://www.temple.edu/english/uwp.html	Tufts University http://www.tufts.edu/as/wac/wacweb.html
University of Arkansas at Little Rock http://www.ualr.edu/%7Eowl/	University of Florida http://web.nwe.ufl.edu/writing/
University of Hawaii-Manoa http://alaike.lcc.hawaii.edu/writing/WAC.htm	University of Illinois--Urbana-Champaign http://www.english.uiuc.edu/cws/wac/wacmain.html
University of Missouri - Columbia http://cwp.missouri.edu/index.html	University of Maryland - College Park http://www.umuc.edu/ewp/
University of Minnesota http://composition.cla.umn.edu/instructor_web/index.htm	University of Pennsylvania http://www.sas.upenn.edu/writing/
University of Richmond http://www.richmond.edu/~wac/	University of South Dakota http://www.usd.edu/engl/writingcenter.html
University of Texas - Austin http://uwc.fac.utexas.edu/	University of Toledo http://writingcenter.utoledo.edu/wacweb/newhome.htm
Virginia Tech http://www.uwp.vt.edu/	Washington State University Writing Programs http://owl.wsu.edu/

Wright State University	Youngstown State University
http://www.wright.edu/academics/wac/wac1.htm	http://cc.ysu.edu/wac
Source: (WAC website, GSU, 2002)	