

BUSINESS EDUCATION DIGEST

ISSUE XVIII
DEC 2009

Teaching with Technology to Decrease Writing Apprehension and Increase Writing Skills in a Business Communication Course

Lajuan Davis, Diane Fisher and Connie Forde¹

ABSTRACT

This research study includes results of a quasi-experimental research study utilizing two classes of collegiate business communication students—one class taught with traditional instructional methods and the other class taught with a combination of technologies—to determine if a difference existed in scores of the two groups on writing apprehension scales, writing assignments, and unit tests. The literature review suggested that teaching subjects with technology could decrease writing apprehension and increase students' writing ability. The study that although differences did exist between the scores of students taught with traditional methods vs. the students taught with technology, no significant statistical differences existed between the two groups.

Introduction and Literature Review

Research indicates that American business and industry executives and managers want future employees to possess employability skills, not just computer skills, and businesses want to hire employees who will be assets to the companies, not liabilities. Employability skills are the skills, other than technical skills, that make employees an asset to an employer (Cotton, 2002), and business executives and managers have specific skills in mind that are necessary for employees to own. In addition to possessing other, various necessary skills, “business education research has indicated that writing and oral communication skills are very important to employers in hiring and promotion decisions” (Elias, 1999, p. 38; Jaderstrom, 2005).

¹Dr. Lajuan Davis is with the Department of Technology Education at the University of Southern Mississippi. She may be contacted via email at lajuan.davis@usm.edu. Dr. Diane Fisher is with the Department of Technology Education at the University of Southern Mississippi. She may be contacted via email at diane.fisher@usm.edu. Dr. Connie Forde is with Mississippi State University. She may be contacted via email at cforde@colled.msstate.edu.

However, students' not mastering these communication skills could be related to a fear factor concerned with learning efficient [oral and] written communication skills known as communication apprehension (Elias, 1999; Blin, Lowe, Meixner, & Nouri, 2003). "There are two components of communication apprehension: writing apprehension and oral communication apprehension. Writing apprehension, defined as a fear of writing, has an impact on students' willingness to write and is not equal to poor skills" (Elias, 1999, p. 39). Furthermore, students experiencing writing apprehension try to avoid writing whenever possible. Studies have found that writing apprehension can be such a serious issue for students that it can influence students' curricular and/or career choices. This fear affects students' selection of courses and "their likelihood of making good grades" (Riffe & Stacks 1992, p. 39). "Apprehensive students will choose academic majors that they believe will require less writing, while non-apprehensive students will seek out majors where more writing is required" (Wiltse, 2006, p. 182). Although a number of studies were initially conducted after the identification of writing apprehension in 1975, a very modest amount of research has been conducted on the subject in the last decade, and few of the studies conducted included research on college undergraduates (Wiltse, 2006). Therefore, learning to identify and possibly relieving some of this writing apprehension in students can assist them in improving their writing skills and ultimately achieving success in their business communication courses and perhaps their careers.

Because the problem of communication apprehension continues to pervade the business communication classroom, this phenomenon warrants being addressed and some changes in pedagogy being made to counter the effects that communication apprehension may have on learning.

One of the techniques for decreasing writing apprehension that needs to be explored is that of teaching communication with different types of technology. For the present generation of students, technology is a familiar face. Traditional students have been exposed to technology via school systems, public libraries, homes, and the entertainment industry. Students embrace technology even when teachers and instructors shy from it (Rea, Hoger, & Rooney, 1999; Livingston, 2006). By using technology as a tool to increase student learning, writing apprehension could be decreased as students are actively engaged in the learning experience. Furthermore, "integration of technology frequently relates . . . to the improvement of writing" (Shafer, 2002, p. 38).

Some of the technologies that can be incorporated into the teaching/learning process in a business communication classroom are an interactive SMARTBoard that would be utilized for document writing and formatting demonstration purposes; computer lab or laptop usage, which would allow students to work on writing assignments after the demonstration; and e-mail usage, which would enable students to send written drafts to the instructor and receive comments/critiques of their work. Additionally, other

technologies such as use of blogging and/or chat sessions could be incorporated into a business communication course to give students more practice writing in an effort to decrease their apprehension about writing. However, for purposes of this study, the SMARTBoard, computer lab and e-mail usage were utilized.

Comparisons of writing apprehension levels (measured via the Writing Apprehension Scale), writing assignments, and test scores of students taught with the previously mentioned technologies could be compared to the apprehension levels, writing assignments, and test scores of students taught with the traditional methods of lecture, handouts, and overhead transparencies to determine if teaching with technology can decrease students' writing apprehension and increase students' writing ability.

If technology can be used to facilitate learning, then by integrating technology into the business communication environment, students will embrace the technology and possibly experience a reduction in writing apprehension, if the apprehension exists.

Statement of the Problem

Today business and industry leaders are adamant that future employees possess specific skills—written and oral communication skills—to ensure the success of the students as employees and, thus, ensure the success of the businesses for which the students are employed (Wardrope & Bayless, 1999; Bline, et al., 2003). However, a recent study suggested that students often do not perceive communication skills—written or oral—as extremely important skills to possess (Davis, Riley, & Fisher, 2003). Research studies have indicated that one possible explanation for students' lower ranking of communication skills could be related to a fear of communication known as communication apprehension which may inhibit students' learning (Elias, 1999; Bline, et al., 2003). The study highlighted in this article specifically addresses the effect that teaching with and without technology has on writing apprehension in a business communication course taught at university level.

Purpose of the Study

The purpose of this study was to determine if integrating technologies such as the interactive SMARTBoard, computer lab usage, and e-mail usage into some college-level business communication classrooms at a university in the southeastern U.S. could help lessen writing apprehension among business communication students and increase writing ability.

Justification of the Study

Today business and industry leaders continue to appeal to the American educational system to produce more *employable* employees. Therefore, students must realize that they have to possess certain skills to be employable and that one of those skills is written communication. If, however, students struggle with writing apprehension in their business communication classes where students have traditionally developed their writing skills, then steps must be taken to decrease this apprehension because apprehension can cause stress, and stress inhibits learning (Mogel, 2005).

In-depth exploration of methods to decrease writing apprehension can include integrating SMARTBoard technology—an interactive whiteboard—as well as, computer lab usage and e-mail usage into the business communication classroom to determine if teaching with technology decreases writing apprehension and increases writing ability. Since no previous research has been conducted on whether or not SMARTBoard technology coupled with computer lab usage and e-mail can reduce students' writing apprehension and thus enhance their learning experience, then exploration in this area was warranted.

Research Hypotheses

The null hypotheses formulated for this study are as follows:

1. There will be no difference in total scores on Writing Apprehension Scale pretests/posttests of business communication students enrolled in an intact business communication class that receives instruction using technology from the scores of students enrolled in an intact business communication class that receives traditional classroom instruction.
2. There will be no difference in total scores on writing assignments of business communication students enrolled in an intact business communication class that receives instruction using technology from the total scores of students enrolled in an intact business communication class that receives traditional classroom instruction.
3. There will be no difference in total scores on unit tests of business communication students enrolled in an intact business communication class that receives instruction using technology from the total scores of students enrolled in an intact business communication class that receives traditional classroom instruction.

Limitations of the Study

The generalizability of the information provided by this study will be limited to business communication students at the university in the southeastern U.S. because intact business communication classes were used for the research and, thus, randomization of sample selection did not occur.

Definition

This study contains the following term that may need accurate definition in order to

aid the reader in understanding the terminology:

1. Writing Apprehension Scale (WAS) – This instrument was developed by researchers John Daly and Michael Miller in 1975 as a measure of self-reported writing apprehension. The scale contains 26 questions representing possible sources of writing apprehension. The questions “measure anxiety about writing in general, evaluation of writing by various groups, writing milieus, self-evaluation, and worth of writing” (Bline, Lowe, College, Meixner, Nouri & Pearce, 2001, p. 63).

Methodology

The purpose of this study was to determine if integrating technologies such as the SMARTBoard—an interactive whiteboard—computer lab usage, and e-mail usage into some university-level business communication courses could help decrease writing apprehension and increase writing ability among business communication students. The groups participating in this study were two intact classes of business communication students from a university in the southeastern United States ($n = 64$). The independent variable for the study was the use of technology as a teaching tool. One group of students in the study was taught business communication using the traditional methods of lecture, handouts, and overhead transparencies. The other group of business communication students was taught using a SmartBoard, computer lab, and e-mail. The dependent variables for the research study were students’ scores on Writing Apprehension Scale pretests and posttests, students’ scores on writing assignments, and students’ scores on unit tests.

Research Design, Participants, and Instrumentation

This study was a non-randomized, quasi-experimental, pretest-posttest, control group design. The groups used for this study were two intact classes of university-level business communication students ($n = 64$). Since the groups were intact, the sample for the study is considered to be a convenience sample. To further define the population sample, the Organizational/Business Communication class is a senior-level course at the university and students must have at least a junior standing and must have completed English Comp I and II to enroll in the course. A demographic survey was administered to the students in order to obtain a more accurate description of the sample (Fraenkel

& Wallen, 2003). Items included on the survey instrument were student classification, major area of study, gender, and age.

Writing Apprehension Scale (developed by J. Daly and M. Miller) pretests were administered to the intact classes at the beginning of two business communication units—good-news letters and bad-news letters—and these units were covered in the normal course of study. Throughout the units, one group of students (experimental group) was taught via SMARTBoard interactive technology, computer lab usage time, and e-mail usage, and the other group of students (control group) was taught via the traditional lecture method utilizing overhead transparencies and handouts. The good-news letter-writing unit was used as the pilot study for this project. The bad-news letter-writing unit was used for the actual research study. The same instructor/researcher taught both groups of students for the pilot and actual research studies.

Unit tests taken from the business communication textbook test bank were administered at the conclusion of each writing unit. Content validity for both unit tests was evidenced by having three business communication instructors, who are otherwise independent of this study, examine the instruments to determine whether the content and format of the instruments was appropriate. Internal consistency for the documents was demonstrated by using the Kuder-Richardson approach to reliability (Fraenkel & Wallen, 2003).

The objective for teaching the good-news letter-writing unit is to introduce the concept of business writing to students. The unit teaches students to begin writing their documents highlighting the good news to their audience and following the news with any details/explanation necessary for the reader to have a clear understanding of the information that is being communicated. The unit stresses maintaining a relationship of goodwill with the reader. The bad-news letter-writing unit was also used in this study. The bad news unit instructs the students to begin writing their documents by giving an explanation of the purpose of the document, followed by the bad news, and ending with a counterproposal in order to insure a continued relationship with the reader. These two units were chosen for use in the study because these are the first two units that introduce students to the business writing concepts of briefness, clearness, and conciseness in addition to audience awareness.

During the completion of both units, the experimental group of students (those taught with technology) was introduced to the good-news and bad-news letter units via PowerPoint presentations and in-class writing activities demonstrated utilizing the SMARTBoard. After a review of the unit, students were allowed to begin writing their letters in the computer labs. Students finished the writing assignments for homework and communicated any questions they had for the instructor via e-mail. Students in the control group (taught without technology) were introduced to the good-news and bad-news letter units in the classroom via lecture and use of overhead transparencies. These students completed their in-class writing activities (handouts) with

pencil and paper as the instructor served as a facilitator. The control group began writing their homework letters in class also, again with pencil and paper. They finished the writing assignment for homework.

After completing the good-news and bad-news letter-writing units respectively, participants in both groups again completed the Writing Apprehension Scale as a posttest to determine if a difference existed in apprehension levels of the students taught with the SMARTBoard/computer usage/e-mail technologies versus the students taught by the traditional lecture/ handouts/overhead transparencies method. The difference between scores of the experimental and control groups was analyzed via an analysis of variance (ANOVA). In another step of the research study, the two groups of students' scores on writing assignments and unit tests—good-news and bad-news—were compared to determine if a difference existed in writing scores or unit test scores between the experimental and control group participants. The two groups' scores on assignments and tests were analyzed via analysis of covariance (ANCOVA) to determine if differences existed between the two groups' scores, with the students' self-reported ACT scores used as covariate in the analysis.

Findings and Analysis of Data

This study was a non-randomized, quasi-experimental, pretest-posttest, control group design. The groups for this study were two intact classes of business communication students from a university in the southeastern U.S. (n = 64). The findings resulting from the review and analysis of data generated from this study are presented in the following section. Table 1 shows a summary of the means and standard deviations for each of the dependent variables utilized in the pilot and actual research studies.

The Writing Apprehension Scale (WAS) pretests were administered to both the control and experimental groups, and descriptive statistics were evaluated for each group. The mean (average) writing apprehension level was established by the original creators of the WAS to be 79.28, so that students whose scores fell below 79.28 had a lower-than-mean writing apprehension level, and students whose scores were above 79.28 had a higher-than-mean writing apprehension level (Blaine et al., 2001). Students in both the control and experimental groups demonstrated above mean apprehension levels throughout the pilot and research studies. Writing Apprehension Scale (WAS) pretest scores for the control group pilot study and research study were 83.40 and 82.14 respectively, as compared to the WAS pretest scores for the experimental group pilot study and research study of 82.97 and 81.31 respectively. In addition, WAS posttest scores for the control group pilot study

and research study were 82.90 and 80.75 respectively, as compared to the WAS posttest scores for the experimental group pilot study and research study of 80.66 and 82.94, respectively.

Furthermore, the means scores on Table 1 for the *Letter Scores* (the good-news letter writing unit was used for the pilot study and the bad-news letter writing unit was used in the actual research study) were based on a 100-point letter writing assignment. The means on the control group letter grades in the pilot and research studies were 86.50 and 78.03, respectively. The mean scores for the experimental group letter grades for the pilot study and research study were 86.27 and 79.88. In addition the *Unit Test Scores* on the table reflect mean scores by students on a 65-point unit test. The mean unit test scores for the control group for the pilot and research studies were 58.30 and 50.93, respectively, while the unit test scores for the experimental group for the pilot and research studies were 58.28 and 50.06, respectively.

Table 1 - Means and Standard Deviations of Dependent Variables for Pilot and Research Studies

Variables:	Pilot		Research Study	
	Control	Experimental	Control	Experimental
	F	p	F	p
WAS Pretests	.043	.837	.170	.682
WAS Posttests	1.687	.199	1.690	.199
Letter Grades	.123	.727	1.196	.278
Unit Test Grades	.000	.998	.611	.438

Table 2 shows the results of an analysis of variance (ANOVA) that were computed on the pretest WAS scores between the control and experimental groups. The ANOVA was not significant, $F = .043$, $p = .837$ in the pilot study, and $F = .170$, $p = .682$ in the research study. Therefore, the difference in the pretest apprehension levels between the two groups was not statistically significant at the .05 significance level. Furthermore the table demonstrates that the WAS posttest scores, the students grades on the letter-writing assignments, and the students' scores on the unit tests for the pilot and research studies were not statistically significant at the .05 significance level.

Table 2 - ANOVA of WAS Pretests, Posttests, Letter Grades, and Unit Test Grades

Variables:	Pilot				Research Study			
	Control		Experimental		Control		Experimental	
	M	SD	M	SD	M	SD	M	SD
WAS Pretest	83.40	9.55	82.97	7.02	82.14	7.93	81.31	7.36
WAS Posttest	82.90	5.85	80.66	7.43	80.75	5.61	82.94	7.32
Letter Grades	86.50	7.07	86.27	5.83	78.03	7.07	79.88	5.69
Unit Test Grades	58.30	4.79	58.28	4.06	50.93	3.57	50.06	4.61

Demographics

Demographic surveys were administered to the students in order to obtain a more accurate description of the study participants. Items included on the survey instrument were classification, major area of study, gender, and age. Table 3 shows a demographic description of the control and experimental groups of students who participated in the study. According to the demographic survey, 28 (93.3%) of the 30-student control group participants were seniors, 25 (83.3%) of the control group students were business majors, 18 (60%) students were female, and 24 (80%) of the control group participants were between the ages of 18 – 24. In the experimental group 33 (97.1%) of the respondents were seniors, 29 (85.3%) were business majors, 19 (55.9%) were male, and 32 (94.1%) of the students were between the ages of 18 – 24.

Table 3 - Demographic Description of Study Participants

Variable	Control Group (n=30)		Experimental Group (n=34)	
	No.	Percentage	No.	Percentage
Classification				
Sophomore	1	3.3	0	0
Junior	1	3.3	1	2.9
Senior	28	93.3	33	97.1
Major				
Business	25	83.3	29	85.3
Technology Education	3	10.0	4	11.8
Hospitality Management	1	3.3	0	0
Other	1	3.3	1	2.9
Gender				
Male	12	40.0	19	55.9
Female	18	60.0	15	44.1
Age				
18 – 24 years	24	80.0	32	94.1
Over 24 years	6	20.0	2	5.9

Note: Percentages may not equal 100 due to rounding.

Summary, Conclusions, and Recommendations

In an effort to determine if teaching a collegiate business communication class with technologies such as an interactive white board, computer lab usage, and e-mail usage could decrease writing apprehension and increase writing ability, the researcher conducted a study that involved teaching two classes of business communication students. One class of business communication students was taught with previously listed technologies (experimental group), and the other class of business communication students was taught with traditional teaching methods (control group) of lecture, handouts, and overhead transparencies.

Based on the findings of this study, several conclusions were drawn relating to whether a difference would exist between a business communication class taught with traditional methods and a business communication class taught with a combination of technologies.

1. Both the traditional method of teaching business communication and the teaching-with-technology method produced similar student pretest and posttest scores on the Writing Apprehension Scale.

2. Both the traditional method of teaching business communication and the teaching-with-technology method produced similar student performance results based on the grades of students' writing assignments.

3. Both the traditional method of teaching business communication and the teaching-with-technology method produced similar student performance results based on the grades of students' unit tests.

However, the students taught with technology did have lower apprehension levels and higher grades when taught with technology. Though the results of the study were not statistically significant, additional research is warranted in order to draw more conclusive results concerning teaching *with* versus teaching *without* technology. In relation to the implications and limitations of the research study, the following recommendations for further study are suggested:

1. This study should be replicated utilizing a larger sample size.
2. This study should be replicated for a minimum of two semesters.
3. This study should be replicated with more in-depth usage of technology and additional technologies such as Blackboard, podcasts, and blogs.
4. A study should be conducted to discover if the technology method of teaching business communication is preferred by students with different learning styles.
5. A study should be conducted to determine the effectiveness of teaching other business subjects with or without technology.

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