HELPING BUSINESS STUDENTS IMPROVE AS WRITERS

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ABSTRACT

We determined that a Center for Business Communication (CBC) had a significant impact on helping college of business students improve as writers. The variables were labeled college grade levels, male vis-à-vis female, frequency of visits, reasons for visits, pre-diagnostics vis-à-vis post-diagnostics, and declared majors; they were tested for significant differences relating to the measures of language errors. We found statistically significant differences among students' frequency of visits, reasons for visits, pre-diagnostics vis-à-vis post-diagnostics, and male vis-à-vis female on the measures of total language errors. We conclude the CBC contributed to reducing language errors (noise) in College of Business students' writing.

Keywords: Transmissional Perspective; language errors; noise; improving writing

INTRODUCTION

The workplace, both public and private, is growing increasingly competitive. Industry leaders are taking steps to ensure people they hire have excellent written communication skills. The National Commission on Writing in a 2005 report titled, *Writing: A Powerful Message from State Government,* advised its members states spend nearly $250 million annually on remedial writing training for their nearly 2.7 million employees. In a very brief article for The New York Times (nytimes.com), December 7, 2004, Sam Dillon writes:

> A recent survey of 120 American corporations reached a similar conclusion. The study, by the National Commission on Writing, a panel established by the College Board, concluded that a third of employees in the nation's blue-chip companies wrote poorly and that businesses were spending as much as $3.1 billion annually on remedial training…Some $2.9 of the $3.1 billion the National Commission on Writing estimates that corporations spend each year on remedial training goes to help current employees, with the rest spent on new hires.

The New York Times' used a hook for Dillon's article: "Writing skills crisis". We think business communication educators and administrators of colleges of business should engage in practices that could help business students improve as writers.

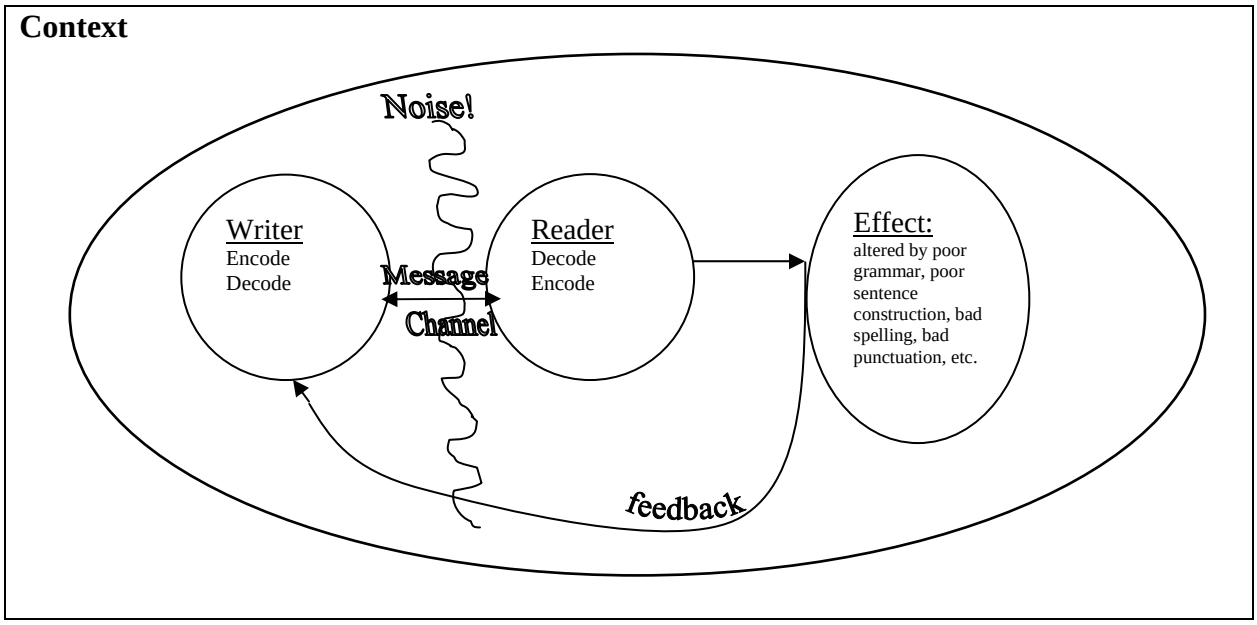
We propose a definition of improved writing: it is essentially an exchange of information and transmission of meaning that is not distorted by the presence of noise in the process of sending and receiving a written message for a desired effect. Shockley-Zalabak (1988) presented an elegant model of the communication process that plainly illustrates how "noise" could distort a message (25). Littlejohn (1989) tells us, "the most thorough discussion" of the Transmissional

Perspective can be found in C. David Mortensen (1972), *Communication: the Study of Human Interaction.* Littlejohn (1989) provides a brief summary of the "Transmissional Perspective":

> Transmissional theories view communication as the transfer of information from a source to receiver. They use a linear model of movement from one location to another. This perspective stresses communication media, time, and sequential elements. Generally it is based on World View I and nonactional assumptions, (27).

We present a model of our own on how knowledge of a written document could be viewed from a Transmissional Perspective. We consider the transfer of information in this model as it takes place between a writer (who encodes and sends a message) and a reader (who receives and decodes a message). We present the process in Exhibit 1 below:

Exhibit 1
The Written Communication Process Model (Exhibit 1)



We define noise as any distorting or distracting language error in a written document not germane to the message itself. We show in Exhibit 1 "noise" to be represented by the squiggly line crashing down like lightning through the transfer of information, between the source (writer) and receiver (reader) that penetrates the message/channel; this illustrates noise as a disruptive distortion. We believe a written document plagued with language errors (noise) might completely distort a message, resulting in an altered effect or failed communication. Documents business students write that are prone to have noise problems are email messages, research reports, progress reports, essays, reprimand letters, resumes and letters of application for employment; noisy documents are often discarded and the reader's feedback to the writer is normally that of non-response, or the most horrible, scorn!

We have encountered student writing where language errors have been so profuse that the student's work fails to satisfy the minimum requirements of the most liberally constructed rubric. An untrained reader of such writing might react to the error prone writing by making a flash

judgment about the writer. Individual students cannot be expected to improve as writers by osmosis or an instantaneous miracle. Business school graduates are not learning many basic skills necessary for effective written communication. Many college students write poorly because their writings tend to be impregnated with too much noise. Corporations need skilled writers and they are willing to pay $3.1 billion annually for remedial training; educators have been keenly aware of college students' poor writing for years.

Bartlett in a January 3, 2003 issue of *The Chronicle of Higher Education* features an article *Why Johnny Can't Write, Even Though He Went to Princeton,* which highlights the problem that many universities are facing. The article raises two poignant questions; "so why is it that, even at the nation's best colleges, the teaching of writing has long been treated less like a high priority and more like an afterthought? And if that neglectful attitude is beginning to change, as seems to be the case, what took so long" (A49)?

Many colleges and universities have created writing labs and/or added courses to their curricula responding to such questions; furthermore, a few educators seem to acknowledge their students need additional assistance with developing college level writing skills. For example, Purdue University Department of English hosts a makeshift internet portal, *http://owl.english.purdue.edu/internet/owls/writing-labs.html*, where the web addresses of more than fifty Writing Labs and Writing Centers are posted. With sparse empirical evidence available to serve as a guidepost for the particular needs of our Center for Business Communication (CBC), measuring the language errors on documents our students actually wrote became a pressing objective.

Input from industry leaders, the AACSB-International, faculty, and administrators resulted in the establishment of centers for business communication at many top business schools, including Notre Dame's Fanning Center. These centers offer a means to address the problem of business students' poor writing. Centers for business communication housed in colleges of business might contribute to the reduction of noise in documents students write, and as a result might help to improve an individual student's writing. The existence of dozens of writing centers located on college campuses suggests that error prone writing is widespread across college campuses.

Business students who aspire to become functional managers (through planning, organizing, leading, and controlling scarce business resources) should have competency in generating written (at a minimum) documents not inundated with noise. Business students must be trained to rely on effective written documents as a requirement for implementing policy and procedures to achieve goals. Written documents plagued with language errors create a problem for industry, business students, faculty, and colleges of business that host centers for business communication. The goal of our CBC is to help individual students improve as writers by comparing important independent variables (gender, majors, grade level, etc.) with dependent noise variables (poor grammar, poor sentence structure, bad spelling and bad punctuation). The CBC was designed in a way that it could isolate and compare variables identifiable with noisy writing in order to develop solutions to the problem of business students' poor writing.

PROBLEM

The CBC set out to determine what interventions could be used to help students improve as writers: College students graduate with error prone writing. Business students upon graduation enter into professions but still write poorly. Plung and Montgomery (2004) in the introductory

chapter of their book call attention to the fact that employment and promotions are highly correlated with good writing. They said "problems persist, despite evidence showing the cost of poor writing to industry," (ix). The public and private sectors combined spend $3.35 billion attempting to fix their employees' problem of poor writing. Our CBC targeted juniors and seniors enrolled in business courses at the COB where this study took place.

In serving our constituency, it was obvious that a long-term goal should be to make them better business communicators. In the short-term, some metrics on the noise variables in their writing had to be determined. A study was undertaken to measure the problematic areas in writing associated with COB juniors and seniors. The CBC was advertised as a place where juniors and seniors could spend "time-on-task" and receive "guided practice" and "timely-feedback" on their required writing assignments. A literature search was conducted to ascertain if any empirical evidence had been published on centers for business communication and their impact on improving business students' writing.

RELATED LITERATURE

Walton (1983) sought to determine the relationship between grammar skills and outcomes of a business communication course. Students were assessed based on 25 sentences containing one of eight types of errors. Of the 236 participating undergraduate students, the findings were moderate to low correlations between written report grades and scores on the usage test; course grade and grammatical competency; past writing classes and test scores; and a significant relationship between competency scores and completion of the business communication course.

Bubolz and David (1983) subjected 35 students to a 50-item objective pre-test/post-test for one semester, whereby all 35 received tutorial instructions once per week on grammar and punctuation. Posttest essays revealed that students' writing improved in quality, meaning the writing no longer interfered with the reader's progress. The subjects' gain of 2.59, although significant, was still 2.6 points lower than a control group.

Davis (1987) designed a study to ascertain the effect of writing centers and peer tutoring on the attitudes of student writers. The 121 students, 43 did visit and 78 did not visit the writing center, studied over one semester showed the greatest gains in positive attitude if engaged in tutorials with the writing center. Students merely enrolled in English composition showed a less positive attitude. Roberts (1988) finds no significant difference in the writing quality growth of students taught by individualized instruction in writing centers and those taught by conventional classroom instruction.

Griffin (2001) recommended a revision of the traditional writing center model from "the writing center occupying the middle ground" to one were faculty and the center "share the middle ground." He said, "instead of fostering an adversarial relationship, business writing centers function most effectively for students when the center complements the classroom" (70).

Kuiper and Thomas (2000) developed a "Strategic Consultancy Model for Establishing a Center for Business Communication." The model integrates goal setting with strengths, weaknesses, opportunities and threats (SWOT) analysis, and evaluative methods. The model can be applied when starting and operating a CBC. It can also be used to guide research on a number of communication issues.

Riordan, Riordan and Sullivan (2000) found that writing across the accounting curriculum significantly improved students' writing skills using pretest/posttest design with

control and treatment groups and a writing consultant. They used three junior level accounting courses: tax, cost, and financial accounting. They found significant improvement in sentence structure, grammar and word choice for accounting students they sampled.

Mabrito (1999) outlined how collaborative writing in classroom was different than in the workplace. He said teachers should work towards creating learning experiences for students that are more realistic to "prepare them as future communicators in the workplace." Knight (1999) compared 52 top-ranked business schools and suggested that written and oral communication was considered an important requirement for an undergraduate business degree. The literature review resulted in articles directly related to the operation of the CBC.

Valentine (1999) shared the three ways students were served in a pre-professional program at the Goizueta Business School of Emory University. Students were offered (1) one-on-one instruction, (2) editing assistance, and (3) writing requirements of the Goizueta Business School were linked with those of the School of Liberal Arts. A few relevant studies, published abstracts from conference presentations and position papers were found relating to writing centers, centers for business communication, tutorials, individualized instruction, pre-test/posttest measures and the impact they had on students' writing. Several papers (Griffin, 2001; Riordan, Riordan and Sullivan, 2000; Kuiper and Thomas, 2000) provided some support that CBC intervention might have an impact on improving business students' writing. In addition to what was found in the literature, we followed specific coordinating procedures for classroom and CBC interventions.

PROCEDURE

Every student enrolled in four Business Communication and two Principles of Management courses the fall 2003 and spring 2004 semesters was asked to participate in pre-diagnostic and post-diagnostic writing samples. Students wrote on the topic, *"a college educated person is smart for three reasons"* for the fall 2003 and spring 2004 pre-diagnostics. Students wrote on the topic, *"college educated persons are smart for several reasons"* for the post-diagnostics for fall 2003 and spring 2004 semesters. Students wrote for 15 minutes on a pre-diagnostic and 15 minutes on a post-diagnostic. Students were made members of the CBC.

Students at that time the sample was taken were asked to complete an application, which made them members of the CBC. All students were made aware that peer tutoring and professional tutoring would be available to them through the CBC. Students' names and demographic information were collected via the CBC application. Each student was made a folder that was stored under lock-and-key. Folders were updated with each visit the student made. A corresponding account number was the only link between the applications and writing samples. Therefore, no tutor and even the Assistant Coordinator knew the gender, race, address, grade level, major or any other demographic or leading information about the student in association with the writing sample's actual evaluation.

The pre-diagnostic writing sample was taken two weeks after the beginning of the fall 2003 and spring 2004 semesters. The post-diagnostic was taken two weeks prior to the close of the fall 2003 and spring 2004 semesters. Therefore, students could receive twelve weeks of tutorial assistance with writing if they chose to. Students participating were informed that they could receive an additional five percent (as a bonus of their letter grade for the entire course) by attending the CBC on a volunteer basis for any purpose regarding a writing assignment from any course they needed assistance. A signature log was maintained at the CBC to verify all student

visits. A policy notice was memorialized in writing and disseminated to all students in the six core courses. The reward structure was based on a *fixed-ratio reinforcement schedule*.

Morris (1999) says "on a fixed-ratio schedule, a certain number of responses must occur before reinforcement is presented. This results in high response rate because it is advantageous to make many responses in a short time in order to get more reward" (185). Students would receive all or none of the points, provided they met the minimum requirement of at least five visits to the CBC during the semester they were enrolled in Business Communication or Principles of Management. Students' visits (repeat plus non-repeat) to the CBC for fall 2003 and spring 2004 semesters were 453 and 498 respectively. Twenty-five percent of eligible students actually received bonus points. In addition, The *CBC Diagnostic and Numeric Assessment Rubric* was used to evaluate the pre-diagnostic and post-diagnostic writing samples, (see Appendix A to review the rubric).

The *CBC Diagnostic and Numeric Assessment Rubric* is a weighted scale based on the most documented errors, common among students. Grammar and sentence structure received more weight than punctuation and spelling since reduction of those errors is associated with improved writing; see (Riordan, Riordan and Sullivan, 2000). An error was represented by the corresponding weight in each category: (1) Spelling, (2) Standard Grammar, (3) Punctuation and (4) Sentence Structure. For example, in the category of Standard Grammar, a student with four verb errors would have a raw score of four and a weighted score of eight. The lowest possible score for any student was "100" and the highest possible score for a student was "zero," no errors.

Pre-diagnostics and post-diagnostics writing samples were randomly assigned to one of three trained tutors to be evaluated anonymously. The Assistant Coordinator reviewed all scored writing samples to authenticate the tutors' scoring. The Assistant Coordinator and tutors were not made aware of the data collections purposes at the time they scored the samples. Those samples were then placed into corresponding folders with the matching account numbers for tutorial purposes in order to establish a systematic program of individualized instruction. Giving weights to the differing categories of writing allowed each student a guidepost for improvements. In addition, students enrolled in Business Communication courses the fall 2003 and spring 2004 semesters received intensive instruction on four writing assignments.

The four mandatory writing assignments were (1) Employment Application Letter, (2) Resume, (3) Reprimand, and (4) Letter of Good Will. Students received written instructions for each assignment. Students were required to submit a version of their very best work at least one week prior to the actual instruction on the topic. Students then received written comments and mock letter grades on assignments that were returned to them one period before instruction. The professor pulled-up a blank Microsoft Word document on the classroom LCD projector screen and together with students, built "ideal" models of each assignment. Students participated in class by offering their inputs and witnessed the creation of an acceptable employment letter, resume, reprimand, and good will letter through a collaborative writing process.

As each class member participated with comments and questions, an ideal written document emerged. The purpose was to teach towards appropriate word usage, grammar, expression (voice) and sentence structure. Students were allowed to see how sentences were constructed from scratch. They learned how to reduce sentences and how to link clauses appropriately. They learned about topic sentences, paragraph development (unity) and transitional phrases. In addition, students were taught how to manipulate documents using "shortcuts" in Microsoft Word. All students then were encouraged to visit the CBC and get

tutorial assistance. Students could submit documents two or three times before a final grade was assigned. Students chose what version of a particular assignment was to receive a final grade. This fervor was related to scientifically interesting findings.

DESCRIPTIVE DATA

Students were selected randomly based on their course enrollments. Six core courses (two Principles of Management and four Business Communications) were College of Business (COB) core requirements. All COB students are required to complete Business Communication and Principles of Management. It was assumed that the students sampled were normally distributed. The six courses combined were representative of the entire COB undergraduate junior and senior population. The fall 2003 and spring 2004 semesters, a total of 115 students had completed both pre-diagnostic and post-diagnostic writing samples. Students who had completed only a pre-diagnostic and dropped or were absent the day of the post-diagnostic sampling were excluded.

Attrition was not considered a problem because a random effects model was assumed as opposed to a fixed effects model. Kachigan (1991) says, "if the levels under investigation were chosen at random from a population, then what is called a random effects model is appropriate and we may generalize the result to the population at large" (212). We assume core courses are distributed normally. In Table 1, information is presented concerning pre-diagnostic and post-diagnostic samples. In addition, many independent variables with many levels were compared to dependent variables and showed statistically significant differences.

Table 1
Usable Questionnaire Returns

Group Type	Group Size	Total pre/post Sample	Usable Percent
Students	Fall =57/Spring =58	115	100

Analysis of the demographic data revealed that 53 males and 62 females completed pre-diagnostics and post-diagnostics for fall 2003 and spring 2004. One hundred fifteen students completed writing samples from a junior and senior population of approximately 500. Fifty-seven students completed pre-diagnostic in fall 2003 and fifty-eight students completed pre-diagnostic the spring 2004. Fifty-seven students completed post-diagnostic in fall 2003 and fifty-eight students completed post-diagnostic the spring 2004.

The declared majors of the respondents were: Accounting – 22, Management – 36, Marketing – 13, Finance – 4, MIS – 29, and other major – 9. Among the respondents, there were 6 sophomores (accounting for 5.3%) because the scope of the research was delimited, 70 juniors (61.9%), and 37 seniors (32.7%). Two students did not report their majors on the CBC application form. The breakdown of respondents across majors and class standings is presented in Table 2. Respondents were not asked to report their ethnicity. The means, standard deviations and totals for the pre-diagnostic and post-diagnostic writing samples with total error in each category are presented in Table 3.

Table 2
Descriptive Statistics by Declared Majors and Class Level Categories

Class	Accounting	Finance	MIS	MGMT	MRKT	Other	Total
Sophomore	2	1	0	2	1	0	6
Junior	17	3	16	24	8	2	70
Senior	3	0	13	10	4	7	37
Total	*22*	*4*	*29*	*36*	*13*	*9*	*113*

Table 3
Means, Standard Deviations, Maximums, and Totals of Raw Score Indication with Category

ERROR TYPE	**Mean**	**SD**	**Maximum**	**Totals Errors**
Pre-Grammar	2.82	2.515	17	324
Pre-Sentence Structure	.63	1.347	8	72
Pre-Spelling	.83	1.408	7	96
Pre-Punctuation	.71	.998	3	82
PRE-TOTAL ERRORS	***4.99***	***3.386***	***18***	***574***
Post-Grammar	2.06	3.318	11	237
Post-Sentence Structure	.32	.942	6	37
Post-Spelling	.92	1.421	7	106
Post-Punctuation	.60	.867	3	69
POST-TOTAL ERRORS	***3.90***	***3.418***	***16***	***449***

RESULTS

A One-Way Analysis of Variance (ANOVA) and Paired-Samples T-Test procedure was used to test for mean differences among independent variables and dependent variables (a) college grade level, (b) declared major, (c) pre-diagnostic and post-diagnostic (d) reason for visit, (e) frequency of visits, and (f) gender regarding students' documented total writing errors. We used an appropriate Tukey's HSD test as our multiple comparison procedure when a significant difference was revealed on an independent variable with three or more levels. This type of post-hoc analysis is required to determine what the significant difference is on a combination of all levels of the same independent variable. The hypotheses were stated as follow:

Hypothesis $_1$: There is no significant difference in pre-diagnostic or post-diagnostic total errors in writing samples taken from male and female business students.

Hypothesis $_2$: There is no significant difference in pre-diagnostic or post-diagnostic total errors in writing samples among declared majors.

Hypothesis $_3$: There is no significant difference in pre-diagnostic or post-diagnostic total errors in writing samples of business students and their frequency of visits to the Center for Business Communication.

Hypothesis $_4$: There is no significant difference in pre-diagnostic or post-diagnostic total errors in writing samples and students' college grade levels.

Hypothesis $_5$: There is no significant difference in pre-diagnostic and post-diagnostic total errors in writing samples from business students.

Hypothesis $_6$: There is no significant difference in pre-diagnostic or post-diagnostic total errors in writing samples of business students' enrolled in Business Communication courses and other business courses.

Raw score data was used to determine the rejection or acceptance of the null hypotheses. Descriptive statistics, results of a One-Way Analysis of variance (ANOVA) and a Paired-Samples T-Test on Hypothesis$_5$ are summarized for the six null hypotheses tested at a significance level of .05.

Hypothesis$_1$ was rejected and a significant difference existed in the means for gender on post-diagnostic measures of total writing errors at a p= .034 level. The mean on total writing errors for pre-diagnostic was 3.90 and the mean error for post-diagnostic was 4.99. Male business majors with a mean of 4.63 made statistically significant more writing errors than females with a mean of 3.27. The pre-diagnostic was not significantly different.

Hypothesis$_2$ was not rejected for having no significant difference in the mean for declared major on pre-diagnostic and post-diagnostic measures of total writing errors.

Hypothesis$_3$ was rejected and a significant difference existed in the means for frequency of visits on pre-diagnostic and on post-diagnostic measures of total writing errors at the p= .056 and p= .032 levels respectively. The mean on total writing errors for pre-diagnostic low, medium and high frequency visits was 4.40, 4.90, and 6.43 respectively with a total mean of 4.99. The mean on total writing errors for post-diagnostic low, medium and high frequency visits was 3.54, 3.43, and 5.57 respectively with a total mean of 3.90. A Tukey's HSD test revealed a significant difference in the means of pre-diagnostic low and high frequency visits at a p= .044 level. A Tukey's HSD test revealed a significant difference in the means of post-diagnostic low and medium visits at a p= .040 level and the medium and high frequency visits at a p= .047 level. High frequency visits had significantly more writing errors than low and medium frequency visits.

Hypothesis$_4$ was not rejected for having no significant difference in the mean for grade level on pre-diagnostic and post-diagnostic measures of total writing errors.

Hypothesis$_5$ was rejected because a Paired-Samples T-Test revealed a statistically significance difference between pre-diagnostic and post-diagnostic measures of total writing errors with, df= 114, t= 2.654 and significant 2-tailed p= .009. The means for pre-diagnostic total errors and post-diagnostic total errors were 4.99 and 3.90 respectively. Post-diagnostic total mean error was significantly lower than pre-diagnostic total mean errors. The statistical difference was not by chance alone.

Hypothesis$_6$ was rejected and significant differences existed in the mean for Business Communication and other courses on pre-diagnostic measures of writing errors at the p= .010

level. The mean for Business Communication was 4.04. The mean for general business courses was 6.20 and the mean for other course plus Business Communication was 5.44. A Tukey's HSD test revealed a significant difference in the means of general business courses and Business Communication course on pre-diagnostic writing. Students in Business Communication made significantly less errors than general business courses and Business Communication plus other courses when noting the reason for visit.

DISCUSSION

We have found evidence our Center for Business Communication (CBC) did have a positive impact on reducing language errors in business students' writing. The writing errors of juniors and seniors came down from 574 pre-diagnostic total errors to 449 post-diagnostic total errors, with df= 114, a t=2.654 and significant 2-tailed p= .009. The systematic interventions of classroom training, CBC professional and peer tutoring, and a fixed-ratio reinforcement schedule culminated into significant reductions in total writing errors for these students. With significant differences found across several independent variables, we can confidently say the error reduction did not occur by chance alone.

Documents students write inundated with language errors impede on the reader's progress; see (Bubolz and David, 1983; Waltman, 1983). We believe readers become very frustrated when their progress is interrupted continuously by noise from preventable language errors. It is difficult to know at what point a threshold for tolerance is crossed for the reader; however, we believe one does exist for all readers confronted with noisy writing. Articles in widely circulated periodicals, such as Dillon (2004) and Bartlett (2003), add to the reader's hysteria when reacting to noisy writing. We propose a continued use of our CBC as an intervention to help student writers reduce the reader's frustration from impeded progress; we need to teach students how to reduce language errors, thus, neutralizing the reader's propensity to become frustrated by being bogged down in noise.

The results show that female students made significantly fewer total errors than males. Therefore, male students should receive mandatory tutorial sessions in addition to the normal routine of voluntary visits. Standard grammar is the most problematic area for juniors and seniors at the COB where the study took place. High frequency of visits to the CBC had a significantly high mean total error because some students waited until the last minute to visit the CBC in order to receive bonus points.

A quick review of attendance logs, cross-referenced with student folders and diagnostic scores, reveals a handful of students made last-minute visits to the CBC during the final two weeks of the fall or spring semesters. Cross-tabulation of visits showed a proportion of 20 percent of total errors associated with 23 students. High frequency visits, five or more times, should have had the opposite effect on total errors; however, the fact that significantly more errors occurred (means pre-diagnostic of low 4.40, medium 4.90, and high 6.43 respectively; post-diagnostic of low 3.54, medium 3.43, and high 5.57) meant that a different reinforcement schedule should be considered.

The total errors related to high frequency visits suggested that students with the most noise in their writing visited the CBC at the last minute, merely to earn the bonus points for their Business Communication or Principles of Management courses. This problem is consistent with a drawback of using fixed-ratio reinforcement schedules: behavior may sharply rise nearest to

the expected reward. That reinforcement tool drawback could be a reasonable explanation for the 23 students' mad-dash to the CBC.

One solution might be to offer students reward points for visiting the CBC on a fixed-interval schedule, documenting and assigning reward point systematically throughout the semester, perhaps one percentage point on a biweekly basis. The CBC should work closely with faculty, sharing the middle ground (Griffin, 2001), in training students. They should be taught to understand that reducing noise in their writing could result in improved communication; furthermore, students who create written documents with fewer language errors would impede less on the reader's progress. We assume an individual student's writing is improved if the reader can progress unimpeded and the intended effect is achieved.

Although perfect grammar and sentence structure can never denote profundity of thought and guarantee the written document will achieve the desired effect, reducing those types of language errors removes the possibility that they might become noise (as we have so defined it) altering an intended purpose. Imagine Thomas Jefferson's reaction if when signing the final draft of the United States Constitution saw it peppered with grammar and spelling errors. The Business Communication professor and other COB faculty members should reward students for seeking tutorial assistance with their writing. The COB dean should continue to fund the CBC. Research must be a CBC priority, with its focus on continuing to collect raw data from business students' writing; it should pioneer new ways to measure language error reduction and create innovative techniques that improve on an individual business student's writing.

Limitations and Delimitations

The study results should not be generalized to any population other than the approximate 500 juniors and seniors sampled at the institution where the study was conducted. Each of the six junior level courses sampled was assumed distributed normally. The COB students enrolled in six core courses taught by one professor are representative of the junior and senior student population. A fixed-ratio reinforcement schedule was used to motivate a large number of student participants, creating a "mad-dash" to the CBC during the final few weeks, and other centers replicating this study should be mindful of such. Seventy percent of the freshman class tests into one of four levels of remedial reading and writing; therefore, the CBC did not target to serve this group as its initial constituency. Many freshmen do not satisfy the basic requirements of English Composition. They were excluded from this study for those reasons.

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APPENDIX A

CENTER FOR BUSINESS COMMUNICATION DIAGNOSTIC AND NUMERIC ASSESSMENT RUBRIC	**Weighted Tally**					**Errors**
1. SPELLING						
1a. POLYSYLLABIC WORDS	1	2	3	4	5	
1b. COMPOUND / HYPHENATED WORDS	1	2	3	4	5	
1c. SAME-SOUND WORDS	1	2	3	4	5	
1d. PREFIXES / SUFFIXES	1	2	3	4	5	
2. STANDARD GRAMMAR						
2a. VERBS	2	4	6	8	10	
2b. NOUNS / PRONOUNS	1	2	3	4	5	
2c. ADJECTIVES / ADVERBS	1	2	3	4	5	
2d. PREPOSITIONS	1	2	3	4	5	
2e. CONJUNCTIONS	1	2	3	4	5	
3. PUNCTUATION						
3a. PERIOD / EXCLAMATION / QUESTION MARK	1	2				
3b. COMMA	1	2				
3c. COLON & SEMICOLON	1	2	3			
3d. QUOTATION MARKS	1	2	3			
4. SENTENCE STRUCTURE						
4a. SIMPLE SENTENCE	2	4	6	8	10	
4b. COMPOUND SENTENCE	2	4	6	8	10	
4c. COMPLEX SENTENCE	2	4	6	8	10	
4d. COMPOUND-COMPLEX SENTENCE	2	4	6	8	10	
					TOTAL ERRORS	