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Writing Apprehension and Writing Intensity in an Industrial Organization

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WRITING APPREHENSION AND WRITING INTENSITY IN AN INDUSTRIAL ORGANIZATION

by

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This study hypothesized that high writing apprehensive subjects would differ significantly from low writing apprehensive subjects in regard to the writing intensity of their jobs. A random sample of 143 people employed in clerical, technical, secretarial, professional, supervisory, or administrative positions in one midwestern company was studied. Subjects completed the Writing Apprehension Test and the Writing Intensity Questionnaire. The latter was designed for this study to measure the amount and type of writing projects subjects produced, plus audience and deadline pressure. A significant difference ($p = .004$) was seen in the mean writing intensity scores between high apprehensives ($n = 54$) and low apprehensives ($n = 43$).

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

Overview

Mastery of communication skills is generally recognized as an important asset for any person who hopes to succeed in a career in business. The lack of such skills and any specific problems which can prevent adequate development of them would, therefore, appear to be of interest not only to the individual worker, but also to business as a whole. This study explores a particular communication skill, writing; it describes the value and role of writing skills in business; it identifies a specific condition which can hamper the development of adequate writing skills, writing apprehension; and it explores the relationship between writing apprehension and the intensity of writing in different jobs.

Writing Apprehension in Business

The concept of writing apprehension will be described in detail in Chapter II. Although it would seem to have a direct impact on the ability of the individual to perform on the job, only two studies have attempted to explore the relationship of writing apprehension to writing intensity in the working world. Both of these served more to verify the validity of the Writing Apprehension Test (WAT) than to offer insights of value to business. Yet each of them

suggested that feelings of writing apprehension may carry over into the individual's work environment.

In the first of these studies, Daly and Miller (1975b) administered the Writing Apprehension Test to 176 employed adults. They then related the respondents' apprehension levels to their levels of agreement with the statement, "The writing requirements of my job are very great." The researchers found a significant effect of writing apprehension on perceived communication requirements. Those individuals with high writing apprehension perceived their occupations as having significantly fewer written communication requirements than did those individuals with moderate or low apprehension levels. Daly and Miller concluded that their results demonstrated the validity of the WAT.

The next year, Daly and Shamo (1976) hypothesized that individuals with high writing apprehension would perceive jobs with low writing requirements as more desirable than jobs with high writing requirements. They tested this hypothesis and its reverse, that individuals with low writing apprehension would be attracted by jobs with high writing requirements, in 95 undergraduate students. Students completed the WAT and assessed perceived writing demands and perceived desirability of various occupations and of their own vocational choices. Highest and lowest occupations in terms of perceived writing demands were determined. Subjects with high writing apprehension found occupations with low perceived writing requirements more attractive than they did those jobs with high perceived writing requirements. This difference was statistically significant. On the other hand, low

writing apprehensive subjects were not particularly attracted to jobs with high perceived writing requirements. The authors speculated that high apprehensives may be more sensitive to writing demands than low apprehensives or that low apprehensives may feel they can redefine writing requirements of desirable jobs.

Both of these studies suggest that people are attracted to and tend to be employed in jobs which correspond to their level of writing apprehension, a finding which could be of value to the corporation which endeavors to place employees in those positions in which they can be most productive. Yet each of these studies has major flaws which limit their usefulness in drawing conclusions of value to business.

The Daly and Miller (1975b) study relied totally on respondents' subjective interpretation of the writing requirements of their jobs, and the instrument used to measure this interpretation consisted of a single response to one question (Agree or disagree: "The writing requirements of my job are very great"). No attempt was made, apparently, to ensure that the subjects' opinions about the writing requirements of their jobs were based on some actual measure of time spent writing or type of writing done. In addition, the obvious risk that apprehension level might lead to misperception of writing demands was not discussed.

Daly and Shamo's (1976) results are even less easily generalized to the work place. Their subjects were undergraduate college students who were not holding the jobs for which they were required to assess writing demands. They were asked to guess what they thought would be the requirements of jobs which they had never held, then to assess

how attractive they felt their own perceptions were. The limitations of drawing conclusions from such conjectures are obvious: The students may have had totally inaccurate perceptions of the nature of the jobs, thus basing their attraction on job descriptions which, in reality, did not exist. And, like the Daly and Miller study, this one did not consider the fact that the respondent's writing apprehension may have, itself, caused a misperception of the true nature of the job requirements.

Despite their limitations (i.e., an unsophisticated measurement tool in the first study and results based on second-hand perceptions in the other), results of both of these studies suggest a negative relationship between writing apprehension and writing intensity. In addition, written communication skills are highly valued by business and writing apprehension limits the individual's ability to write well and, presumably, to perform well on the job. Given this potentially important role of writing apprehension in industry, therefore, it would appear that another study, one not subject to the same limitations of these two previous studies, is needed.

Statement of the Problem and Hypothesis

The current study addressed this question: Would a negative relationship between writing apprehension and writing intensity still exist in a population of employees asked to evaluate the writing demands of their current positions, using a questionnaire designed specifically for that evaluation? To answer this question, a questionnaire was designed to measure three aspects of writing intensity:

amount of writing, audience pressure, and deadline pressure. (Details concerning the design and use of that questionnaire are given in Chapter III.) This questionnaire was administered to a sample of currently employed subjects to see if the negative relationship between writing apprehension and writing intensity, noted in the two studies mentioned here, could be confirmed. Thus, this study hypothesized that there would be a difference between subjects with high writing apprehension and those with low writing apprehension in regard to the writing intensity of the jobs which they hold.

Summary and Preview

This chapter has argued that a need exists for data which can detail the relationship between writing apprehension and writing intensity in business. A hypothesis was set forth: A difference will be seen between subjects with high and those with low writing apprehension in regard to the writing intensity they report in the jobs they hold. Chapter II reviews literature which documents the role of communication and writing in industry and discusses in detail the problem of writing apprehension. Chapter III discusses the materials and procedures used to test the hypothesis of this study; Chapter IV gives the results of the study; Chapter V draws conclusions from those results and discusses implications.

CHAPTER II

REVIEW OF RELATED LITERATURE

Overview

This chapter reviews selected studies in the literature which have explored the role of communication activities, specifically writing activities, in business. It discusses some of the writing problems employers have encountered in their workers and looks in depth at one of those problems, writing apprehension.

Communication in Business

A number of studies have shown that a great deal of the business workday must be spent performing communication-related activities. In one such study, Hinrichs (1964) sampled 232 supervisory and technical employees (primarily chemists and chemical engineers) in a research and development organization to determine on-the-job time allotted to communication and non-communication tasks. By having subjects fill out questionnaires at randomly selected times (indicated to them by a pocket alarm watch) for 11 consecutive workdays, Hinrichs concluded that his subjects spent an average of 61% of an eight-hour day communicating. Of this total, 35% of the day was spent listening or speaking, 16% writing, and 10% reading.

Klemmer and Snyder (1972) extended Hinrichs's study to a new population of workers, including clerks, secretaries, technicians, and a variety of engineering professionals in a large research and

development laboratory. They based their conclusions on information obtained from 2,626 questionnaires completed by the subjects and on data from observers who recorded overt activities of 3,126 subjects at randomly selected times. These investigators found that 50% to 80% of their subjects' workday was spent engaged in communications-related activities, with two thirds of that time spent talking.

In a more recent study, Flatley (1982) not only confirmed the findings of these earlier researchers regarding the amount of business time devoted to communication activities, but she also found that managers predicted such activities would increase in the future. In a survey of 89 managers of private businesses in the San Diego area, Flatley determined that over 70% of her subjects anticipated an increase in the volume of their business communications over the next five years.

Writing in Business

Since communication activities have been found to play such a major role in the business place, it is natural that researchers have looked at the importance of specific skills to business. Writing, in particular, is a communication skill which has been explored by a number of investigators. Several researchers have looked at the types of written communications which are used most frequently on the job.

Bennett (1971) reported a study conducted among top executives (usually vice presidents) of large California-based corporations. Eighty-three percent of the 35 respondents said they used written communication skills extensively in their present positions. When

asked which types of written media they used most frequently, they listed memoranda, informational reports, letters, and analytical reports.

In another assessment of the use of different types of writing, Huegli and Tschirgi (1974) asked recent business engineering graduates how frequently they used certain communication media while they were in entry level jobs. Their 101 subjects appeared to prepare written reports to their bosses, written proposals, written requests for information, and technical reports with similar frequency.

Another researcher looked at two areas: percentage of time spent writing and types of writing categories used most frequently. Anderson (1980) sent questionnaires to university graduates who had taken an introductory technical writing class while they were in school. His 841 respondents, working in a variety of fields, indicated that they spent a great deal of their time at work writing. Sixty-nine percent spent more than 10% of the workday writing; 48%, more than 20% of their time writing; and 15%, more than 40% of their time writing. They also indicated that the written media they used most frequently on the job were memoranda, letters, step-by-step instructions, and general instructions.

Memoranda were again listed as the most frequently used written media, in a study reported by Flatley (1982). This investigator not only reported types of written communications used by low-, middle-, and upper-level managers currently, but also assessed their predictions for the use of these media five years in the future. Memoranda were the most frequently used category by middle- and upper-level

respondents and were also used frequently by low-level managers. The remaining media categories, in the order most frequently used by subjects, were letters, reports, and forms.

Similarly, writing was found to be an important part of the workday for a sample of graduates of a school of business administration. Storms (1983) conducted a survey to determine the types of writing these subjects were doing on their jobs. His 837 respondents included a third with five years or less of work experience, a third with six to 20 years of experience, and a third with over 20 years of experience. Ninety-eight percent of them reported that writing is a part of their current jobs, with 43% claiming to spend over 20% of their work time writing. The three types of writing done most frequently by these subjects were letters, memoranda, and short reports.

Another area which has been described in the literature relates to the importance of good writing to job performance. Anderson's (1980) 841 university graduates responded that writing was an important part of their work. The ability to write well was at least of "some importance" to 93%; it was at least of "great importance" to 67%; and it was of "critical importance" to 16%.

Importance of writing to present job performance and to potential for future advancement was also studied by Storms (1983). He reported that 88% of his business graduate respondents felt that the ability to write well was important to advancement in their organizations. In addition, 97% felt that the ability to write well was at least "important" for performance of their present jobs; 74% said it was at least "very important"; and 30% said it was "essential."

Penrose (1976) looked at whether earlier results reporting the importance of writing to business leaders could be documented in the Austin, Texas community. His conclusions were based on 157 questionnaires completed by a sample of business people listed in the Yellow Pages of the Austin telephone book. While the subjects ranked business communication skills (business speaking and business writing) somewhat lower than Penrose had expected, these skills did remain in the top half of the list of 12 abilities which subjects considered valuable to their work.

Still other researchers have demonstrated that writing is one of the skills which employers most frequently demand of their employees. Page and Perelman (1980) used structured telephone interviews to question 105 supervisors of recent university graduates. The purpose of their study was to ascertain supervisors' perceptions of the abilities of graduates to perform basic skills. Approximately 60% of them said they noticed weaknesses in the graduates' written and oral communication skills.

Sixty-six percent of Bennett's (1971) sample (35 California executives) felt that business communication training, both in writing and in speaking, was essential to prepare people adequately for management positions, and no respondent stated that such training was unnecessary.

In an early investigation in this area, Simonds (1960) conducted a nationwide survey among 133 business leaders, including company presidents; plant, production, and personnel managers; controllers and treasurers; sales and merchandising chiefs; engineers; and heads

of methods or production control. Simonds's results showed, "Communications and human relations skills were by far the most frequently used. About 80 percent of the managers put 'skill in letter writing' at the top of their list" (p. 88).

Twenty years later, Hewing (1980) was still able to confirm Simonds's findings. Hewing sent questionnaires to firms which recruited graduates of business schools in order to determine the communication tasks employees should be prepared to perform and how adequately college courses prepared graduates for this performance. Of the 71 representatives of firms who responded, 87% indicated that college graduates should come to them with skill in writing management reports, 89% demanded skill in formal report writing; 87% wanted skills in writing business letters; and 100% wanted new graduates to have more skill in writing memoranda.

In another study published that year, Thomas and Sireno (1980) compiled a list of the most important skills and abilities for management personnel in various industries. Their list of 115 activities, which combined ideas from a literature review and suggestions of employers, was submitted to representatives of a random sample of firms. Among the authors' conclusions were these: "The most frequently needed competencies identified were in the area of communication;" and " ... nine of the 20 [top] competencies involve some form of communication skills" (p. 48).

Finally, Madeline (1980) reported that communications expertise was one of the most important skills that Ford Motor Company recruiters look for in potential employees; he then related that Henry Ford II,

when asked what primary qualities he saw in his most successful executives, listed " ... honesty, candor, good judgment, intelligence, imagination, and the ability to write clear, concise memos ... " (p. 13).

Studies reporting percentage of the workday devoted to communication activities have already been described. Similarly, researchers have estimated, by observing or surveying several types of workers, what percentage of the workday is spent doing writing.

One of the most extensive of these studies was conducted in 1958 by the Operations Research Group at Case Institute of Technology. The sample comprised about 1,500 industrial chemists in 42 different companies. Conclusions were based on direct observation at random times by external observers and on self-reports by the participants, in response to signals from a wrist alarm watch. Both observation and self-report methods demonstrated that the subjects spent half of their workday communicating, a quarter of it working with equipment, and the rest in personal or social activities. A total of 15.9 hours per week was devoted to scientific communication, more than that spent on all other professional activities combined.

Hinrichs's (1964) study, discussed earlier, confirmed the Case Institute findings. He reported that supervisory and technical employees in his sample spent similar amounts of time writing (13% to 17% of the workday). He further showed that these employees spent 26 minutes per day writing progress reports and memos, 18 minutes per day editing, and 17 minutes per day redrafting; and that two thirds of the writing done was intended for internal company readership.

Klemmer and Snyder's (1972) findings were also based on a combination of self-report and objective observation. Their subjects (clerks, secretaries, technicians, and engineering professionals at a research and development laboratory) claimed to spend 22% of each day writing, while observations showed that they spent about 14% of their time writing. Thus Klemmer and Snyder, while confirming the general findings of the Case Institute report (i.e., a large percentage of the workday is devoted to writing and communicating) did point out a greater discrepancy between observations and self-reports than did the Case Institute study.

Other researchers have chosen to look at the importance of writing skills in specific professions and occupations. Two studies have examined the role of writing in the accounting profession. In the first of these studies, Andrews and Koester (1979) sent questionnaires to recently graduated accountants, accounting educators, senior accounting students, and major employers of accounting graduates, including certified public accounting firms, corporations, and government agencies. Questions asked about the effectiveness of communications skills of the graduates, percentage of time accountants spent using specific communications skills, and areas of difficulty graduates encountered in performing communications tasks. Nearly half the respondents stated that new employees had ineffective writing skills. The subjects also estimated that about half of a new employee's time would be devoted to writing letters, reports, statements, or memoranda.

In the second study in this field, Addams (1982) had a similar objective: to determine which communications skills and writing projects are most important to an accountant's success. He compiled a list of 13 writing projects which were indicative of accountants' writing tasks, then devised a questionnaire asking subjects to rank these projects in order of importance to their jobs. A random sample of accounting graduates from Brigham Young University was chosen, and two questionnaires were mailed to each subject. The subject was asked to complete one questionnaire personally and to submit the second to an accounting associate (an accounting graduate from a different university) to be completed. Results were based on responses from 150 Brigham Young graduates and from 106 accounting associates. They showed that the ability to write was considered "moderately" to "substantially" important in contributing to successful performance appraisals in accounting positions.

Secretaries are another group of workers in whom writing skills have been analyzed. In order to determine secretaries' writing responsibilities and their difficulties meeting these responsibilities, Treece (1972, 1973) analyzed responses to questionnaires from 565 certified professional secretaries. She determined that 94.7% of her subjects regularly composed letters, that 70.3% regularly wrote reports, and that 82.7% regularly composed miscellaneous materials other than letters or reports. Experienced secretaries, as well as beginning secretaries, reported difficulty in some areas of written communications. The areas most often reported to cause difficulty were these: being able to write without wasting time; avoiding trite

expressions; conciseness; a psychological approach; and report forms.

Writing Problems in Business

Thus, it has been well documented that writing skills are important in a variety of job levels in business, including secretarial, clerical, technical, professional, and administrative positions. In addition, some efforts have been made to analyze the amount of time some employees devote to writing tasks. Because such a variety of occupations claim that writing is an important and time-consuming task, it is logical to assume that any factors which interfere with the ability of employees to write well will have a direct impact on industry.

Several authors have discussed some factors which contribute to ineffective writing among employees. In order to help business students understand how business people view communications problems in industry, Cox (1968) sent students to interview 112 managers from various-sized companies. Communications was listed as the most important source of trouble in the managers' jobs, with 80% of the respondents naming communications and 32% specifying written communications as their biggest source of problems. Cox blamed inadequate training for this problem and concluded that college business writing requirements needed to be reassessed in light of his findings.

In a more recent effort to pinpoint the cause of writing difficulties, Aldrich (1982) surveyed 254 top- and middle-level managers, 183 of whom had completed college degrees and some of whom had doctorates. Respondents were asked in a questionnaire to rate their

own writing skills and to describe their writing style and their writing difficulties. Over half of these subjects attributed at least part of their writing problems to apprehension, reluctance, dread, and "downright hate" of writing.

Writing Apprehension

Such negative feelings about writing have been referred to as "writing apprehension." Daly (1978) says that the individual with high writing apprehension " ... finds writing unrewarding. Consequently he or she will avoid, if possible, situations where writing is perceived as required. Further, when unavoidably placed in such situations, he or she will experience more than normal amounts of anxiety" (p. 10). An instrument to measure levels of writing apprehension in people, the Writing Apprehension Test (WAT), has been developed by Daly and Miller (1975b). This instrument will be discussed in detail in Chapter III.

Some effects of high levels of writing apprehension on the individual have been described in the literature. Daly and Miller (1975c) correlated SAT-Verbal scores and WAT scores with several variables in a sample of 280 undergraduate students enrolled in either basic, remedial, or advanced composition courses. In this study, they tested the following hypotheses:

1. There will be a significant difference on SAT-Verbal scores between "remedial" and "normal" students if they were categorized as such on the basis of SAT-Verbal scores.

2. The correlation between writing apprehension and perceived likelihood of success in writing courses will be

be significantly greater than the correlation between SAT scores and that perception.

3. The correlation between writing apprehension and willingness to take other courses in writing will be significantly greater than the correlation between SAT scores and that willingness.

4. Individuals with high apprehension of writing would report significantly lower expectations of success and willingness to take other courses in writing than individuals with low apprehension.

5. Individuals voluntarily enrolled in advanced writing courses will have a significantly lower mean score on writing apprehension than a general population mean.

6. High apprehensive individuals would report significantly less success in previous writing courses than low apprehensives.

7. Male writers would have significantly higher scores on the writing apprehension measure than female writers (pp. 251-253).

Students completed the WAT, reported their SAT-Verbal scores, and answered these questions:

1. In the courses you have previously taken in high school or college where writing was a major requirement, how successful do you feel you were?

2. If you had an opportunity to voluntarily take other writing courses, how willing would you be to take them?

3. There are a number of courses available in the university for people who want to take advanced writing. Please indicate the likelihood that you would be taking one of these courses voluntarily.

4. My general expectations of success in courses that stress writing is [sic] _____. [Students were given five choices ranging from "very high" to "very low."]

5. In the course I am taking right now in writing I expect to be ____. [Students were given a seven-point, semantic differential-type scale ranging from "very successful" to "very unsuccessful"] (pp. 253-254).

The authors found that placement in remedial composition classes was based on SAT scores, but that WAT scores did not correlate with that placement. They also discovered that WAT scores correlated significantly with previous success in writing classes, willingness to take writing classes, and expectations of success, but that correlation between SAT scores and these answers was not significant. Thus, they concluded that, not only is the WAT a valid measure of writing apprehension, but it is possibly a superior method to assess predisposition toward writing than the currently used standard, the SAT-Verbal score.

In another study examining writing apprehension and writing competence, Daly (1977) tested three hypotheses among 22 low apprehensives and 21 high apprehensives, whom he identified by administering the WAT to 140 undergraduate students. The hypotheses were these:

> 1) Highly apprehensive writers would produce significantly shorter compositions in terms of number of words, characters and statements, which 2) would be lower in diversity (e.g., type-token ratio and number of uncommon words) and qualification (e.g., commas and words ending in 'ly') and 3) would be rated lower by readers in terms of message quality (p. 567).

Students were asked to read a short essay and to write a composition about it. Essays were analyzed for content by a computerized program measuring structural characteristics and reading ease and for message quality by two raters. Significant differences were seen between high and low apprehensives regarding structural characteristics and message quality; no difference was seen in the area of reading ease. The results were viewed as another verification of the validity of the WAT.

Still another study (Daly, 1978) tested whether low apprehensives would perform better on a comprehensive test of writing skills than would high apprehensives. The WAT and a 68-item, multiple-choice writing competency questionnaire were administered to 3,602 undergraduate students. High and low apprehensive subjects were identified, and a one-way analysis of variance was performed, using the competency test score as a dependent measure. Significant differences between low and high apprehensives were seen. A supplemental analysis included data from moderate apprehensives; their competency scores fell between those of the two extreme groups. The author concluded that the confirmation of this hypothesis also confirmed the validity of the WAT.

Faigley, Daly, and Witte (1981) tested the hypothesis that scores between high and low writing apprehensive subjects would differ on standard tests of competency and performance. Like Daly, these researchers used the WAT to identify 55 high apprehensive and 55 low apprehensive subjects from a sample of undergraduate students. Subjects then completed eight standardized measures of writing competency, all of which were developed by the Educational Testing Service. They also wrote two essays: one, narrative and descriptive; the other, argumentative. The essays were evaluated for length, syntactic measures, and overall quality. Results indicated that writing apprehension affected both writing competency and writing performance.

> For all but two measures, high apprehensives scored lower on tests of writing-related skills. Low apprehensives scored significantly better than high apprehensives on two assessments of general verbal ability, a measure of reading comprehension, and two objective tests of writing ability widely used for placement in college writing courses. Scores

> on the objective tests of writing ability reveal that high apprehensives have less command over matters of usage and written conventions than low apprehensives.... Highly anxious writers produced essays significantly shorter and less syntactically "mature" or "fluent" than their low-apprehensive counterparts (p. 19).

The effect of writing apprehension on academic choices has also been described. Daly and Shamo (1978) tested 181 undergraduate students to see if writing apprehension was related to which college majors students saw as desirable, based on the writing demands they perceived in these majors. Students completed the WAT; they indicated on a scale of 1 to 7 how much writing they felt 28 different academic majors would require; they responded to a seven-step, bipolar adjective set of "desirable-undesirable" for each of those majors; and they recorded their own major. High and low apprehensive students were identified, as were majors with perceived high and low writing requirements, and those two groups were compared. A significant interaction was seen between writing apprehension and writing requirements of the majors on the perceived desirability. Majors the students were actually enrolled in also reflected relative levels of writing apprehension. The author states that his results represent another validation of the WAT.

Another area in which the role of writing apprehension has been studied is that of teacher role expectancies. Daly's (1979) sample consisted of 33 elementary and secondary school teachers; all were female and all were experienced classroom teachers. He described hypothetical students to the subjects, varying the sex and the characteristics associated with writing apprehension of the hypothetical

students. Then he asked the teachers how well they felt each student would perform in different classes. Daly's results showed that the highly writing apprehensive student was " ... seen by teachers as less successful in a variety of different academic subjects, less likely to succeed in the future, and less likely to receive positive recommendations from them to other teachers" (p. 42). In addition, Daly hypothesized that teachers would give more positive responses to high apprehensive male students than to low apprehensive males, as the teachers themselves would see the former group as fulfilling their own preconceived notions, i.e., that males are more apprehensive about writing than females. This hypothesis was also supported.

Language intensity has also been shown to be related to writing apprehension. Daly and Miller (1975a) administered the WAT to 98 undergraduate students and identified in the group 11 high apprehensives and 12 low apprehensives (basing the classification on the criterion of a score one standard deviation above or below the mean). Language intensity, defined by the authors as "language indicating degree and direction of distance from neutrality" (p. 175), was assessed by having students fill in blanks to complete a message concerning on-campus housing. Scoring was done using the technique of successive interval scaling devised by Jones and Thurstone (1955). Daly and Miller hypothesized that individuals with high writing apprehension would encode less intense messages than low apprehensives. Their results confirmed this hypothesis.

A disparate finding regarding the relationship of writing apprehension and grades in a college composition course was reported by

Fowler and Kroll (1980). When they gave the WAT to 1,257 students taking their first college composition course, these investigators found no significant difference in course grades among high and low apprehensive subjects. They concluded that the WAT may be a more effective measure of state anxiety (transitory and situation-specific), than of trait anxiety (a relatively stable measure, indicating a general proneness to anxiety).

Treatment of Apprehension

Very few investigators have tried to treat apprehensive individuals. McCroskey, whose seminal work in the area of communication apprehension laid the foundation for the study of writing apprehension (McCroskey, 1977), examined the potential of systematic desensitization to decrease levels of communication apprehension (1972). By using the Personal Report of Communication Apprehension (PRCA), McCroskey identified 541 undergraduate students with high levels of communication apprehension. Systematic desensitization, consisting of weekly one-hour sessions for all but 106 subjects, who served as controls, was administered for six weeks. During the sessions, subjects were put into a state of relaxation, then subjected to progressively more and more anxiety-provoking communication apprehension stimuli. After each stimulus, the subject again worked to regain complete relaxation. At the end of the study, all students given desensitization had decreased their PRCA scores, compared with controls. McCroskey concluded that systematic desensitization was a potentially effective treatment for communication apprehension.

Powers, Cook, and Meyer (1979) felt that compulsory performance of an anxiety-producing activity would not alleviate apprehension, but would actually increase it. They examined these hypotheses:

1. Compulsory writing activity will significantly increase students' writing apprehension.
2. Compulsory writing will significantly change the writing apprehension of individuals initially classified as low in writing apprehension.
3. Compulsory writing will significantly increase the writing apprehension of individuals initially classified as high in writing apprehension (p. 226).

These investigators administered the WAT to 57 students enrolled in a basic composition class. After eight weeks of class, during which they wrote five or six essays, students again completed the WAT. Writing apprehension scores were significantly higher in all students at the end of the class than at the beginning, supporting the first hypothesis. This effect was more apparent among low apprehensives than among high apprehensives.

Fox (1980) reported another attempt to treat writing apprehension. He compared the effects of two different methods of teaching writing on writing apprehension and on the overall quality and length of student writing. Working with 106 freshman students enrolled in a remedial composition class, Fox administered the WAT at the beginning and at the end of the 16-week semester. In addition, students wrote essays which were holistically scored by two raters. Students were divided into six classes, which were taught by three graduate instructors. Each instructor taught one experimental and one control section. Experimental classes emphasized small group activities and peer evaluation

of writing projects. Control sections were taught by conventional methods, with all evaluation of projects coming from the instructors. At the end of the semester, writing apprehension had decreased in students in both types of classes, but the decrease was significantly greater among those in the experimental group. The author came to these conclusions:

> First, students' fear and avoidance of writing and of having their writing evaluated can be significantly reduced using either method investigated. Second, the sequential and largely student-centered experimental treatment significantly reduced writing apprehension at a faster rate than conventional instruction. Third, the experimental treatment produced writing at least as proficient in overall quality as the writing produced by conventional composition instruction (p. 47).

To summarize, studies have demonstrated: (a) that writing plays an important role in many jobs in business and industry; and (b) that writing apprehension is a factor which can limit an individual's effectiveness as a writer. It seems logical, therefore, to expect that, as writing apprehension prevents the employee from efficiently performing writing tasks, it will have an effect on business and industry.

Summary and Preview

Chapters I and II have presented the arguments that effective writing skills are important to the successful business career of the individual and are highly prized by employers; that writing apprehension can hamper writing effectiveness and is, therefore, a concern of business people; and that no carefully designed study has been conducted to measure the writing apprehension of people in a variety of jobs

requiring different amounts and different types of writing. From these arguments, it was hypothesized that a difference would be seen between subjects with high and low writing apprehension in the area of writing intensity of their jobs. Writing intensity is defined here as a combination of amount and type of writing performed, plus audience and deadline pressure.

To test this hypothesis, two questionnaires were used. The questionnaires and the procedures for their use and analysis and the subjects are described in Chapter III. Chapter IV presents the results of those questionnaires; Chapter V contains the conclusions which may be drawn from those results and a summary of the study.

CHAPTER III

DESIGN AND METHODOLOGY

Overview

Chapter II suggested that writing apprehension may play a role in the ability of employees to perform their jobs most productively. It pointed out that no carefully designed studies have been done to measure the relationship between the writing demands or intensity of jobs and the level of writing apprehension in individuals holding those jobs. Finally, it hypothesized that, using the Writing Apprehension Test (WAT) and a questionnaire designed to quantitate writing intensity, a difference would be seen in the writing intensity of jobs held by people with high and low writing apprehension levels. This chapter describes the use of the WAT and the development and use of the Writing Intensity Questionnaire (WIQ) to test that hypothesis in a random sample of employed adults. The procedures by which that testing was accomplished and the statistical methods of data analysis are discussed.

Subjects

Subjects were chosen from a midwestern manufacturing firm with over 20,000 employees located throughout the world, 7,000 of whom work in the home office. This company agreed to allow sampling to be conducted with two restrictions: Questions were not allowed to make judgments concerning the employee's job performance which might be compared with

official performance appraisals conducted by supervisors; and corporate officers were not to be included among the employees surveyed.

In addition, the following offers were made to representatives of the company:

1. The company would not be mentioned by name in the final report.
2. The proposal and the final report would be shown to the company representative as they were completed.
3. A cover letter distributed with the questionnaires would request that the employees complete the questionnaires on personal time.
4. Subjects would be fully assured of the anonymity of their answers.

Subjects were a random sample of the approximately 5,000 employees of the company's corporate headquarters, who were listed in the most recent company telephone directory (Spring, 1984). This directory includes telephone numbers for most home-based employees, plus certain employees located in other domestic or international subsidiary offices. It was decided to limit the sample to those employees listed in the telephone directory because they all had company mailing addresses listed, thus allowing the use of interoffice mail for questionnaire delivery.

Two hundred fifty names were chosen, using a standard random-sampling technique. Three types of names were systematically discarded when chosen: names of employees based outside the home offices (to prevent delays and difficulties in questionnaire administration), names of corporate officers (to comply with the company's request),

and names of employees engaged in jobs in which they spend most of their time writing. In regard to this latter stipulation, the telephone directory lists, with each employee's name, the unit in which that person works. Those names associated with such units as Medical Publications, Scientific Publications, Advertising Copywriting, Professional Communications, legal units, and Public Relations were not used. It was suspected that those individuals who had chosen writing careers and who spent most of their workday performing various kinds of writing tasks would not be representative of the whole employee population in regard to writing apprehension and writing intensity. Questionnaires were mailed to 216 employees.

The study was explained fully in a cover letter and consent form, both of which assured the anonymity of subjects' answers, and their written informed consent was obtained. Two weeks after the original packet of materials was sent to subjects, a reminder letter was mailed to non-respondents (Appendix A).

Instruments

Subjects were asked to complete two questionnaires: the Writing Apprehension Test (WAT) and the Writing Intensity Questionnaire (WIQ). The Writing Apprehension Test (Appendix B) was developed by Daly and Miller (1975b). This is a 26- or 20-item questionnaire (the authors recommend deleting six of the questions when the instrument is used outside the classroom), which requires subjects to rate such statements as "I look forward to writing down my ideas" on a five-step Likert-type scale. The 20-item format was used in this study

(Appendix C). Even after omitting the six questions recommended by Daly and Miller to tailor the questionnaire to a non-student sample, three questions (numbers 7, 23, and 25 on Daly and Miller's form, which correspond to numbers 4, 17, and 19 in this study) were still directed to classroom situations. Accordingly, the wording was altered slightly (i.e., "composition" was changed to "writing project" or to "writing") to make the instrument more appropriate for this sample.

Its originators demonstrated that the WAT has a split-half reliability of .94 and a test-retest reliability of .92 (Daly and Miller, 1975b). Daly claimed to demonstrate the validity of the WAT in four studies described in detail in Chapter II of this paper (Daly, 1977; Daly, 1978; Daly and Miller, 1975b; Daly and Shamo, 1978).

The second instrument used in this study was the Writing Intensity Questionnaire (Appendix D), a measure of writing intensity of specific jobs, which was constructed for the purpose of this study. It was developed in this manner:

A list was devised of 11 types of writing projects which are produced by different units throughout the company (Appendix E). This list was based on a combination of information regarding types of writing most frequently produced elsewhere (Chapter II details those studies; they include Anderson, 1980; Bennett, 1971; Flatley, 1982; and Storms, 1983) and on personal observation at the company in which this study was conducted. It served as a nucleus for a more complete list. This list was submitted to seven employees working in different types of units in the company, many of whom had also had previous experience in still other work units. Individuals were chosen whose

input was felt to represent a wide variety of work experiences in the company. Included in the group were people with experience in these areas: medical research, agriculture, information services, control, sales, marketing, production, secretarial, law, advertising, and research and development. These people were asked to examine the 11-item list and to add to it and/or to revise it, based on their own writing experiences in their various jobs at the company. All seven of the people responded to the request.

From their comments, a comprehensive list of 26 different types of writing projects was compiled (Appendix F). The content of these 26 projects was then analyzed, and the items were categorized under six main headings: proposals, plans, and training materials; documents for use outside the company; memos; government and legal documents; reports; and letters.

In order to determine how representative company employees viewed these categories of projects with regard to writing intensity, a list of the categories was submitted to five employees (none of whom had participated in the previous query). These people held or had held positions in secretarial, clerical, agriculture, research and development, laboratory, medical research, sales, and marketing areas. The six categories were listed randomly (by writing them on notecards and having another person choose the cards one at a time in order to determine the order in which they would be listed), and this panel was asked to rank order the categories from 1 (least writing intensive) to 6 (most writing intensive). In addition, they were asked to estimate the number of such projects per time period which they would consider

intensive (e.g., 3 per month, 1 per year, etc.). Appendix G shows the exact instructions which were given. All five of these employees responded to the questions.

Finally, the list of categories was submitted to five more employees (again, none of whom had responded to previous queries). These employees represented the areas of medical research, clerical, sales training and development, marketing, and international medical sciences. This panel was asked to examine the categories and to record, with regard to their own work, who sees each type of project (superiors and others whose opinion they value) and how much time is allotted to each type of writing. Appendix H shows the specific instructions these panelists were given. All five of these employees responded, and their answers were averaged together to define "writing intensity" for this study: i.e., a combination of amount of writing, audience pressure, and deadline pressure.

The Writing Intensity Questionnaire which was devised as a result of these preliminary inquiries consists of three questions about each of the six categories of writing projects: Memoranda; proposals, plans and training materials; letters; reports; documents for use outside the company; and government and legal documents. This is the order in which these categories appear in the WIQ; the order was determined (by examining answers to the questions asked in Appendix G) to be that of increasing intensity (memoranda were considered the least intensive category; government and legal documents, the most intensive).

The questions asked in each category assessed the three facets of writing intensity which comprise the working definition: Question 1

looks at amount of writing done (with the figure given in each category based on the results obtained from questions asked on the form in Appendix G). Question 2 asks about audience pressure (with that number drawn from the answers to questions shown in Appendix H). Question 3 asks about deadline pressure (again, with the time range reflecting answers to questions in Appendix H).

Answers sought in the WIQ were of the yes/no type utilized by Stech (1983) in his contingency model of leadership communication (pp. 83-114). At the end of the WIQ, subjects were asked four demographic questions concerning their job level, educational background, job experience, and specialized writing training (Appendix D). These questions were included in an attempt to assess possible trends among subgroups of the sample.

Administration, Scoring, and Statistical Design

Both the WIQ and the WAT were administered to each subject. The order in which the questionnaires were administered to each subject was randomly determined.

The WAT was scored according to the method described by Daly and Miller (Daly and Miller, 1975b). The writing intensity score was determined by assigning values to each answer (e.g., no = 0; yes = 1, thus giving a range of 0 to 18), then by computing the individual's score. Subjects were divided into three groups reflecting three levels of writing apprehension: high, moderate, and low. Average writing intensity scores were then computed for the two extreme groups. A t-test was performed to determine the difference between the two

extreme levels of writing apprehension in regard to writing intensity. A difference of .05 or below was considered statistically significant.

Summary and Preview

This chapter has described the methods used to test the hypothesis that a significant difference would be seen between high and low writing apprehensive subjects in regard to the writing intensity of the jobs they hold. The development of the Writing Intensity Questionnaire and its administration, along with the WAT, to a random sample of people employed in a variety of jobs in one company, were described, as was the scoring of those questionnaires and the statistical design for data analysis. Chapter IV describes the results of that data analysis, and Chapter V discusses the conclusions which may be drawn from those results, the strengths and limitations of this study, ideas for future research studies related to this area, and implications of those findings for business.

CHAPTER IV

RESULTS

Overview

The purpose of this study was to investigate the relationship between writing apprehension and writing intensity. The procedures used to assess this relationship were described in Chapter III. This chapter presents the results of the statistical analysis of the data obtained by those procedures.

Response Rate

Of the 216 sets of questionnaires sent to subjects, 143 were returned, for a response rate of 66.25%. This unusually high response may have resulted from any or all of these factors:

1. In this company and in the industry which this company represents, research and development receive much emphasis. It would not be surprising, therefore, to see a cooperative attitude toward research projects among a sample of employees.

2. The educational level of the subjects is relatively high, as will be discussed later in this chapter. This might have contributed to the subjects' sensitivity to the needs of research and to their willingness to cooperate.

3. The questionnaires were designed to be completed within a short time (less than 15 minutes), and individuals who saw the packet of materials prior to the study agreed that all pieces were understandable and easy-to-read (Appendices A, C, D).

4. The researcher was available daily at a specified time to answer questions subjects had about the instructions,

the cover letter, or the consent form. Fifteen subjects called with questions.

5. Returning the questionnaires was easily accomplished through interdepartmental mail.

6. Respondents may have perceived writing to be an area in which they had sufficient interest to cooperate with the researcher.

Demographic Data

Demographics of the subjects were determined by analysis of responses to the four questions included at the end of the Writing Intensity Questionnaire (Appendix D).

The first of these questions concerned job level. Of the 143 respondents, 8 (5.6%) described their jobs as clerical; 21 (14.7%), as technical; 19 (13.3%), as secretarial; 70 (49.0%), as professional; 20 (14.0%), as supervisory; and 5 (3.5%), as "other." Respondents who answered "other" were asked to specify. Their responses included executive, accounting, dispensing clerk, word processing, and machine repair (one response in each category). The chart in Figure 1 summarizes these findings.

When subjects were asked the highest grade they completed in school, no subject answered less than 12th grade; 17 (11.9%) said they were high school graduates; 35 (24.5%) had some college; 42 (29.4%) were college graduates; 25 (17.5%) had master's degrees; 19 (13.3%) had doctorates; and 5 (3.5%) responded "other." Those subjects who responded in the "other" category specified these answers: secretarial school, post-doctoral, vocational school, business school, and completing degree at college (one response in each category). Figure 2 summarizes these data.

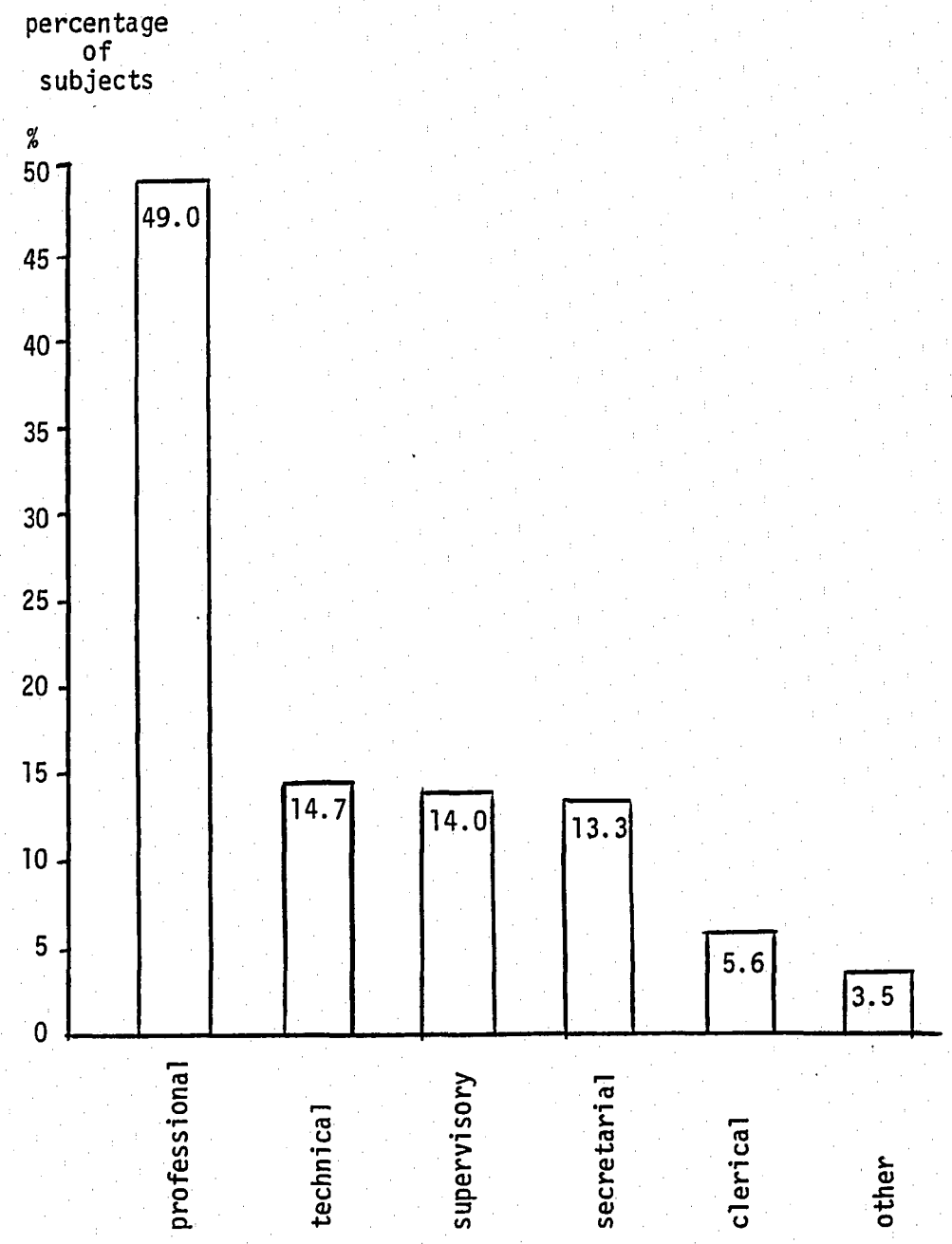


Figure 1. Job level of subjects.

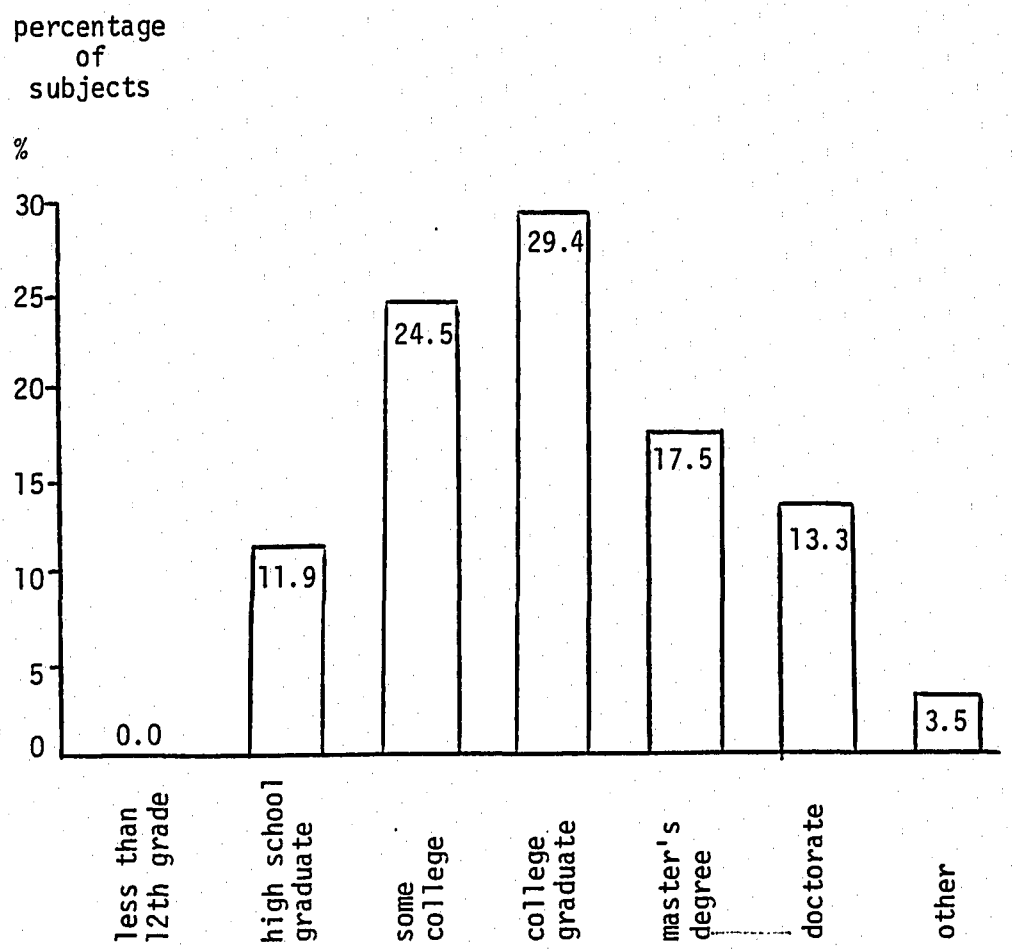


Figure 2. Highest grade completed by subjects.

Job experience was measured by the third demographic question. When asked how long they had had the job they currently hold, 40 subjects (28.0%) answered less than two years; 42 (29.4%), two to five years; 33 (23.1%), five to ten years; and 28 (19.6%), more than ten years. These data are depicted in the chart in Figure 3.

The final question in this section sought information about subjects' specialized writing training. In response, 76 subjects (53.1%) said they had no special training; 32 (22.4%), classes; 32 (22.4%), seminars or workshops; and 3 (2.5%), "other." Subjects who answered "other" specified college courses, freshman composition, and a course offered by the company (one response in each category). These results are summarized in Figure 4.

Writing Apprehension Results

The first step in determining the relationship between writing apprehension and writing intensity consisted of measuring the level of writing apprehension in the subjects. In the 143 subjects, the mean writing apprehension score was 50, the median score was 48, and the standard deviation was 13. Scores ranged from 22 to 91 and appeared to be normally distributed.

Low apprehensive and high apprehensive groups were determined by the use of the extreme groups design (Myers, 1972). The range of mean scores was determined by subtracting 6.5 (one-half of a standard deviation) from the mean (50) and then by adding 6.5 to the mean. This gave a range of 43.5 to 56.5, based on the mean score. Then 6.5 was subtracted from the median (48) and then added to it, giving a range

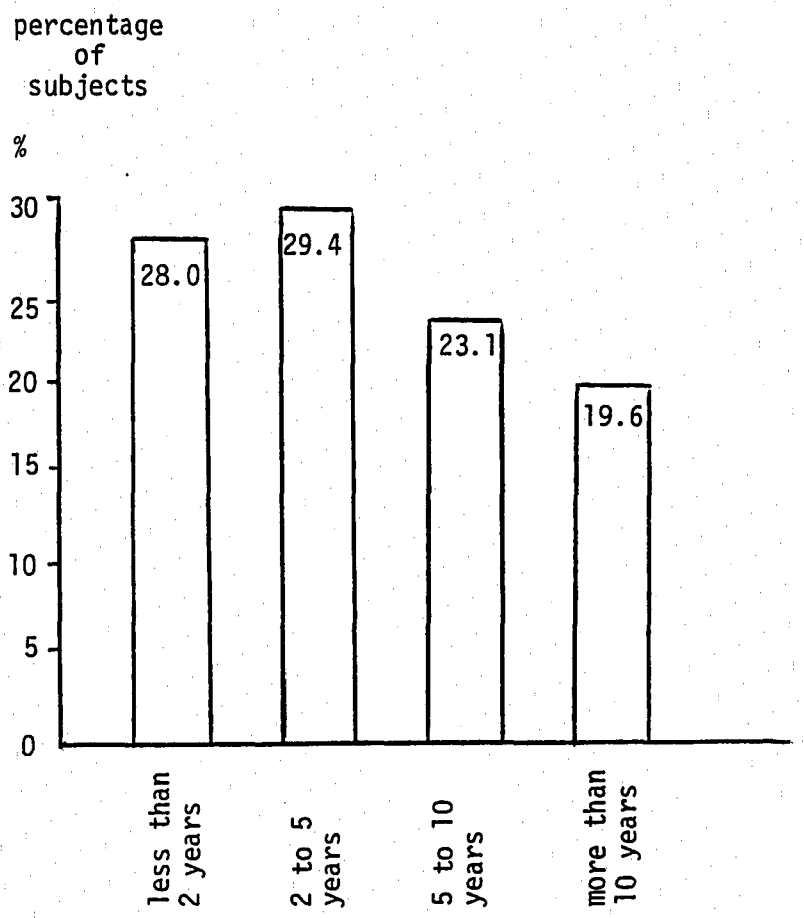


Figure 3. Number of years at current job.

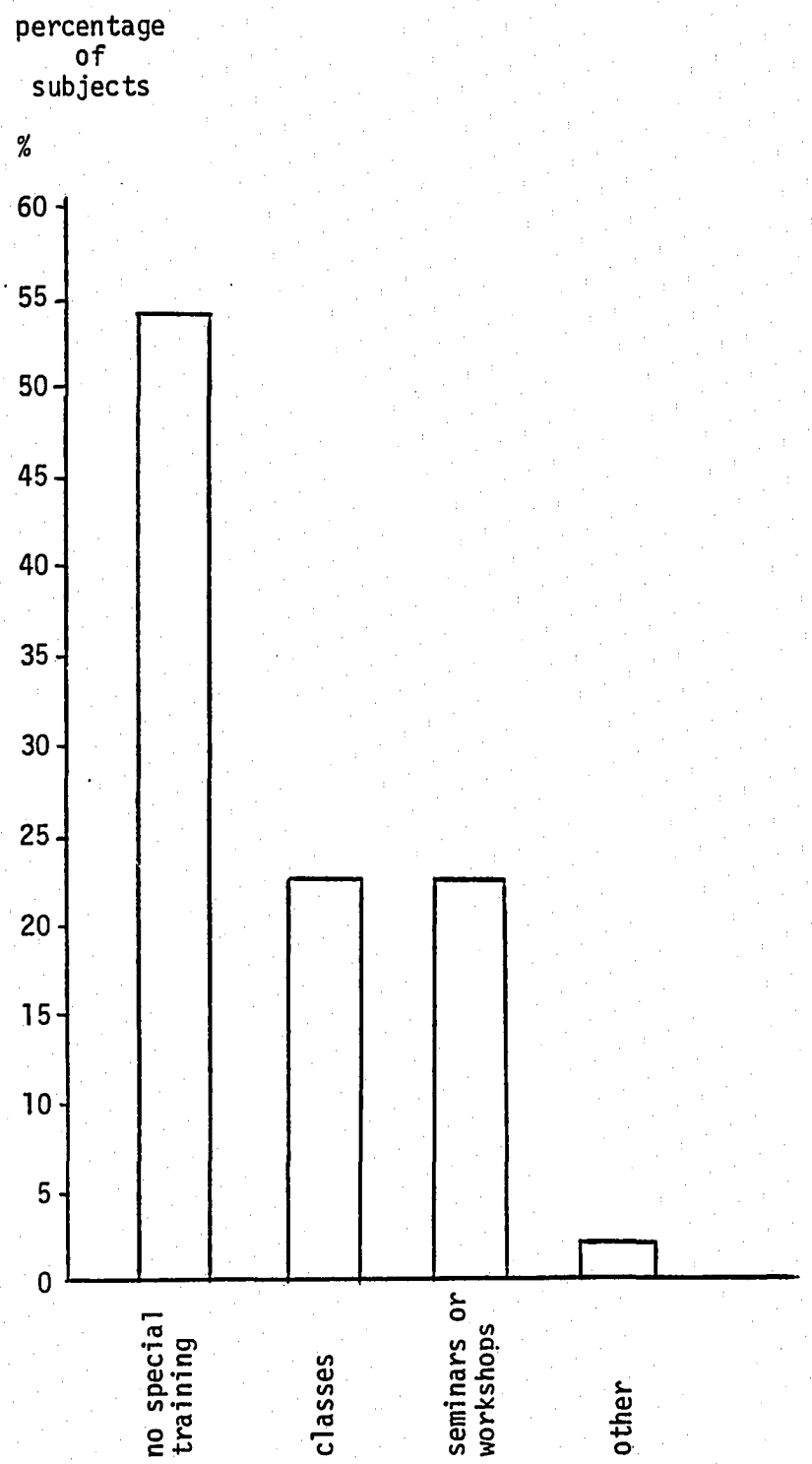


Figure 4. Specialized writing training of subjects.

of 41.5 to 54.5, based on the median. The mean range and the median range were then averaged to give a range of scores from 42.5 to 55.5.

At this point, all scores equal to or less than 42.5 were assigned to the low apprehensive (LA) group. Fifty-four subjects (37.8% of the 143-subject sample) fell into this group. All scores equal to or greater than 55.5 were assigned to the high apprehensive (HA) group. This included 43 subjects (30.1% of the sample). The remaining 46 subjects (32.2%) had scores greater than 42.5 and less than 55.5; this group was not considered in analysis of the data.

Apprehension/Intensity Comparison

Writing intensity scores were tabulated for the subjects. They ranged from 0 to 15 (possible range, 0 to 18). A t-test was performed to measure differences in the mean writing intensity score among subjects in the LA group, compared with that score from subjects in the HA group. In the LA group (n = 54), the mean writing intensity score was 7.0, with a standard deviation of 3.49. In the HA group (n = 43), the mean writing intensity score was 5.0, with a standard deviation of 3.0. The t value of these scores was 2.978, significant at the .004 level. (See Table I.)

Summary and Preview

In these subjects, the hypothesis that a significant difference would be found between high and low apprehensive subjects in regard to the writing intensity of the jobs they hold was confirmed. Chapter V discusses the possible meaning of this finding, plus some of the implications, both for future researchers and for business.

Table 1

Comparison Between Mean Writing Intensity Scores in High and Low Writing Apprehension Groups

	Mean Writing Intensity Score	S.D.	t
High Apprehensive (n = 43)	5.00	3.01	
			2.978*
Low Apprehensive (n = 54)	7.00	3.49	

*probability = .004

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Overview and Conclusions

Chapter II of this paper noted that persons in many different types of jobs spend a great deal of the workday producing writing projects. Further, it cited numerous studies pointing out that the individual worker needs adequate writing skills to satisfactorily perform and to advance in these jobs. Writing apprehension was identified as a condition which can hamper the individual's ability to write well, and thus to perform well on these jobs. Inasmuch as writing apprehension can affect job performance, it was argued that this is a condition of which employers should be aware, as they seek to maximize effectiveness of their staff members.

The two studies which have attempted to link the concept of writing apprehension to the workplace were detailed in Chapter I. Daly and Miller (1975b) asked employed adults how much they agreed with the statement, "The writing requirements of my job are very great." They related those answers to scores on the Writing Apprehension Test (WAT), and discovered that people with high writing apprehension scores perceived fewer writing demands in their jobs than did those with low writing apprehension. Chapter I pointed out that Daly and Miller's results were of limited usefulness to industry because they relied totally on the respondents' subjective interpretation of writing

requirements and that the instrument used (an answer to one question) was very crude. No attempt was made to measure the amount of time or the types of writing subjects actually did, and the risk that apprehension level itself might lead to misperception of writing demands was not addressed.

The second study in this area was reported in 1976 by Daly and Shamo. These researchers asked 95 undergraduate students to assess the perceived writing demands of different jobs and the perceived desirability of those jobs. By relating those responses to WAT scores, the authors concluded that people with high writing apprehension are attracted to jobs with low perceived writing demands and that those with low writing apprehension prefer jobs with higher perceived demands. Chapter I pointed out the limitation of basing results on students' perceptions of jobs which they did not even hold: Students' perceptions may have been totally inaccurate. In addition, this study, like the previously mentioned report, neglected to control for the fact that writing apprehension of subjects may cause misperception of job requirements.

Chapter I claimed that those studies suggest that people tend to be attracted to and employed in jobs which correspond to their level of writing apprehension. The importance of this observation to industry and to employers who want to place workers in jobs where they can be most productive was discussed briefly. That chapter then pointed out the need for a study to investigate further the findings of the Daly and Miller (1975b) and Daly and Shamo (1976) studies. It stated

that results of an investigation of writing apprehension among currently employed workers who were asked to quantitate the writing demands of their jobs, based on a set of identifiable criteria, would be of value to industry.

This study, therefore, was designed to test the following hypothesis: Subjects with high writing apprehension will differ from those with low writing apprehension in regard to the writing intensity of the jobs which they hold. To quantitate "writing intensity," a questionnaire was designed especially for this study by means of a series of preliminary investigations in representative groups of workers. This questionnaire, the Writing Apprehension Test, other study materials, the study design, subjects, and procedures used were described in Chapter III.

When writing apprehension scores and writing intensity scores were measured in a random sample of 143 people in a variety of jobs in one midwestern company, a t-test did show a statistically significant difference between the two groups: People with high writing apprehension scores rated their jobs as being lower in writing intensity than did those with low writing apprehension. Chapter IV gave details of these results. Thus, this hypothesis, as well as the findings from the two earlier studies, was confirmed. The remainder of this chapter describes strengths and limitations of this study, future areas of related research, and implications of these findings for industry.

Strengths and Limitations

Several strengths of this study are apparent. The fact that results confirmed earlier studies, which had used much cruder methods, implies that quantification of writing intensity in jobs may be possible and that, indeed, the WIQ may be a valid measure of that intensity. The high response rate encountered and the subsequent sample size resulted in a sample which could truly be said to be representative of this particular population. Representativeness of the sample might also be expected since subjects were employed in a variety of clerical, technical, secretarial, professional, and supervisory jobs.

The limitations of this study, for the most part, relate to the lack of previous work in the area of quantifying writing intensity. Only two studies documented in the literature have made an effort to link writing apprehension to work activities, and methods in both these studies relied on subjective perceptions of the respondents. In an attempt to overcome such problems, this study tried to score intensity, based on tangible criteria: amount of different types of writing done, audience pressure, and deadline pressure. Although the finalized Writing Intensity Questionnaire (WIQ) resulted from numerous queries to various panels of workers, no large-scale pilot trial of the completed questionnaire was performed. No testing of reliability or validity was done, although the fact that the results of this study confirm previous results does suggest that the WIQ may have some validity.

Another limitation relates to the generalizability of these data. The company sampled represents an industry which places a premium on

education and on the professional skills of its employees. Figures 1 and 2 show that this sample reflected that fact. In addition, certain other characteristics, such as unusually strong emphasis on research and development, may make this industry and possibly this company non-representative of other businesses. The sample chosen for this study also represented only those workers listed in the telephone directory. No conclusions drawn, therefore, may be extended to maintenance or production line workers or to grounds crew or others without a phone listing, since these individuals were not included in the population.

Future Research

The first area of future research in this field should be directed toward verifying the reliability and validity of the WIQ. Testing-retesting and split-half testing need to be performed to establish reliability. Validity might be checked by asking panels of supervisors or personnel professionals if they feel that the WIQ would accurately reflect writing intensity in the jobs with which they are familiar. A second test of validity might be accomplished by administering the WIQ to a sample of workers, then relating scores on it to answers to the question: "Do you agree or disagree with this statement? 'The writing demands of my job are very great.'" To validate the WIQ, subjects with high writing intensity scores should have high agreement with that statement.

The demographic data obtained in this study can be examined to detect trends in subgroups. It will be interesting to see how job level and experience, educational background, and specialized writing

writing training relate to levels of writing apprehension and writing intensity. One might speculate that, as years of education increase, writing apprehension would decrease, since presumably the individual has had more experience and opportunity to perform writing projects in classes. (If, however, Powers, Cook, and Meyer's [1979] hypotheses hold true, high writing apprehensive subjects would grow increasingly apprehensive through years of compulsory writing. This would suggest that WAT scores might even increase with advanced education.) Since over 30% of this sample has college degrees beyond the bachelor's level, the sample may be large enough to give meaningful insight into this question.

Causality is an area which this study has not attempted to address. A significant relationship between writing apprehension and writing intensity was detected, but the reason for that relationship remains to be explored. Do people with high writing apprehension purposely seek out jobs with low writing intensity? Or do they redefine whatever job they happen to find themselves in to deemphasize writing demands? Or do they become less apprehensive through the repeated writing experiences they encounter in high writing intensity jobs? The demographic data on years of job experience may give some small insight here. A longitudinal study of WAT scores over time in individuals in high writing intensity jobs would be better.

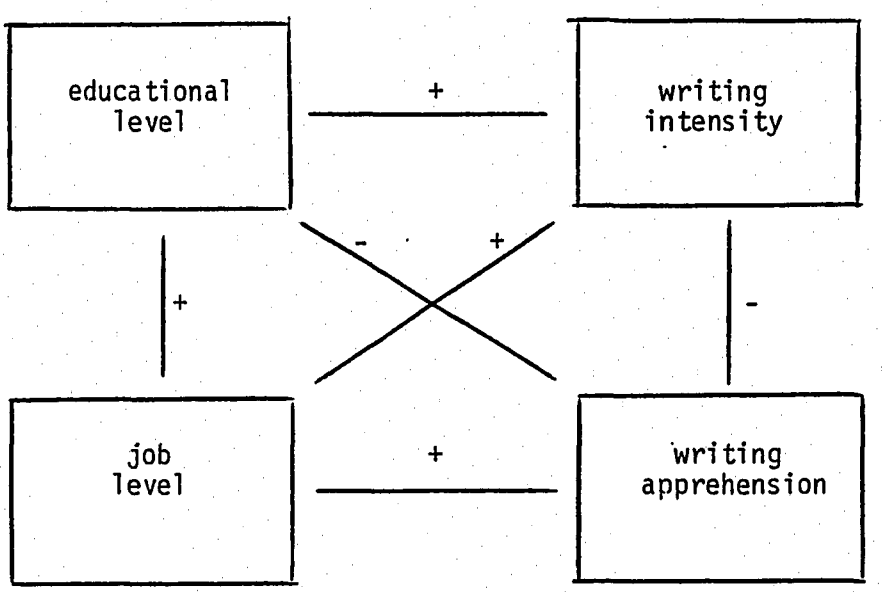
Finally, once the WIQ has been tested and, if necessary, revised to ensure its reliability and validity, this same study should be repeated in samples drawn from a variety of companies in different

industries. Only in this way can the generalizability of the data be determined.

Other research might try to further define the concept of writing intensity. This study has defined it in terms of types and amount of writing, plus deadline and audience pressure. Are there other dimensions this definition has not considered? One such aspect not considered here is eventual use of the writing project. Should a project that will eventually be presented orally be thought to be more intense--or possibly less intense--than one which will be read silently? Several studies might be designed simply to define "writing intensity."

The relationship between specialized writing training and writing intensity or writing apprehension might be a valuable exploration. Demographic data here indicate that about 53% of the subjects say they have had no special writing training and nearly 45% have had classes, seminars, or workshops in writing. Relating these figures to the subjects' WIQ and WAT scores might indicate whether people may seek advanced training due to high intensity jobs or high apprehension levels.

Figure 5 represents a model of writing apprehension and writing intensity in industry which might be used as a basis of organizing these and other future research efforts. A battery of studies could test whether or not the predicted relationships are true. The demographic data in this study represent a crude beginning to verify such a model. The negative correlation between writing intensity and



+ : direct relationship, positive correlation

- : inverse relationship, negative correlation

Figure 5. Proposed writing apprehension/writing intensity model for industry.

writing apprehension depicted in this model has been partially demonstrated by the results of this study.

Implications for Business

An employee who does not have and, for one reason or another, is not developing the skills he or she needs for a job is expensive. The employer must pay that person to perform a job which is not getting done, and must also pay someone else, ostensibly hired for another purpose, to do the work of the ineffective employee. Schedules are not met, morale suffers when people feel they must take up the slack of a nonproducer, and, of course, the self-concept of the ineffective employee is damaged.

This study has demonstrated that writing is one skill which is vitally important to business and that writing apprehension is one condition which can affect a person's ability to write. Further, these data have shown that writing apprehension can be linked to the workplace in two ways: (a) A third (30.1%) of this sample of workers employed in a variety of jobs reported higher than average scores on the WAT; and (b) writing apprehension was shown to be significantly related to writing intensity of jobs.

These findings--and those of future, related studies--may have several implications for managers who want to maximize productivity in their employees. Where a lack of productivity is seen (e.g., reports or publications are continually late or are not forthcoming), the manager may suspect a writing apprehension problem. The WAT has been thoroughly tested for both validity and reliability. It

could easily be administered to the employee in question to see if writing apprehension is, indeed, a cause of the problem.

If writing apprehension is diagnosed, what then? As Chapter II of this paper pointed out, very few studies related to treating writing apprehension have been reported, and those which have been documented have had contradictory results. Powers, Cook, and Meyer (1979), for example, found that compulsory writing increased apprehension, rather than alleviating it. On the other hand, Fox (1980) found that writing classes, both conventional and experimental in nature, reduced WAT scores. Treatment of writing apprehension at this point appears to still be in the experimental stages.

Possibly a more cost-effective measure for companies would be to try to avoid the problem rather than having to alleviate it. If a job has proved to be a difficult one to fill with competent workers and the manager suspects that the writing demands may be related to the problem, screening of new applicants might be tried. Perhaps the job description is misleading, causing the wrong people to apply for it. Does a job have more writing demands than its description implies? Applying the WIQ to a job could give some clue as to whether or not the writing intensity is higher than the manager may have thought. Then, using the WAT as a screening device to detect possible apprehension problems in candidates, the manager would be in a position to give apprehensive job hopefuls a more realistic picture of the writing demands of the job.

The demographic data in this study suggest one more aspect of the writing apprehension problem in business: It may be draining

the effectiveness from some of the highest-paid employees in the company. Although further analysis of these data still needs to be performed, two things are apparent: Both the job level and the education level of these subjects were unusually high. Nearly half (49.0%) of the respondents were professionals, and another 14.0% were in supervisory positions. In regard to education, 60.2% of the respondents had at least a bachelor's degree, with 30.8% of the sample having master's or doctoral degrees. These highly educated professionals are the workers who earn high salaries, and these data indicate that they may share in the problems of writing apprehension. Further analysis will show if it is the higher level jobs which have higher writing intensity, as was suggested in the model earlier in this chapter, and the extent to which writing apprehension is a problem in those jobs.

Summary

This study has demonstrated a significant difference in the writing intensity of jobs held by people with high and low writing apprehension. This chapter has pointed out a multitude of future research studies which should be done to extend this observation and has discussed some of the ways in which this information may be useful to business.

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APPENDIX A

Cover Letter, Consent Form, Follow-Up Letter

July 23, 1984

Dear Fellow Employee:

I am a writer in Audio-Visual Projects and a graduate student at Western Michigan University. The company has kindly permitted me to conduct a study among its employees to gather data for my thesis. My thesis concerns the writing which people do in their jobs, and my questionnaires ask about the amount and type of writing people here do and how they feel about writing.

Your name was one of a small number chosen at random to take part in this study. However, your participation is purely voluntary. I would appreciate your helping me by completing and returning these sheets to me by August 3, 1984. This will take about 15 minutes of your time, and both the company and I would appreciate your filling them out during personal time (at breaks or at home), rather than during working hours. Your responses will be anonymous; your identity will not be revealed and your answers will in no way affect your own job.

Before you look at the questionnaires, please take a few minutes to read the sheet entitled CONSENT. This form explains the study fully. When you feel that you understand it, please sign and date this sheet. After that, please fill out each of the questionnaires, completing form A, then moving on to form B. (It is important that you do them in order.)

If you have any questions, please feel free to call me between 7 and 8 AM in my office (3-6009) or after 4:30 PM at home (344-7463).

When you have completed both forms A and B, please mail them with the signed consent form to me at 9819-88-101. (Your signature on the consent form will not be used to identify your answers on the questionnaires. If you prefer, you may mail the consent form and the questionnaires back to me in separate envelopes.) I need your response no later than August 3, 1984. A summary of the findings of this thesis will be available by November, 1984. If you are interested in learning what my conclusions are, you may contact me after that time.

Thank you very much for your help. I appreciate your cooperation.

Sincerely,

Kaye Bennett

CONSENT

You have been asked to participate in a study which is being done to explore people's attitudes toward writing and the writing projects they perform in their work. Your answers will be completely anonymous and your identity will not be revealed to anyone inside or outside the company. Your answers or your decision not to participate in this study will in no way affect your job.

You are completely free to refuse to participate in this study. If you do decide to participate, you will be asked to complete two short questionnaires, which should take about 15 minutes.

If this consent form is not clear to you, please call Kaye Bennett at 3-6009 with any questions before you continue.

If you feel you completely understand this consent form and if you wish to complete the questionnaires, please sign your name and the date on the line below. (Again a reminder, your name appears only on this consent form. Answers to the questionnaires will be handled in a completely anonymous fashion.)

_____ _____

Signature Date

_____ _____

Researcher Date

August 6, 1984

Dear Fellow Employee:

On July 23, 1984, I sent you two questionnaires regarding the writing you do in your job. If you did not receive these materials or if you have some question about them, please feel free to call me at 3-6009 between 7 and 8 AM, or at my home (344-7463) after 4:30 PM.

The questionnaires should take no more than 15 minutes of your time to complete. Your participation in this project is totally voluntary. If you do decide to participate, please return the forms to me at 9819-88-101 no later than August 13, 1984.

Thank you very much.

Sincerely,

Kaye Bennett

APPENDIX B

Original Writing Apprehension Test

1. I avoid writing.
2. I have no fear of my writing being evaluated.
3. I look forward to writing down my ideas.
4. I am afraid of writing essays when I know they will be evaluated.
5. Taking a composition course is a very frightening experience.
6. Handing in a composition makes me feel good.
7. My mind seems to go blank when I start to work on a composition.
8. Expressing ideas through writing seems to be a waste of time.
9. I would enjoy submitting my writing to magazines for evaluation and publication.
10. I like to write my ideas down.
11. I feel confident in my ability to clearly express my ideas in writing.
12. I like to have my friends read what I have written.
13. I'm nervous about writing.
14. People seem to enjoy what I write.
15. I enjoy writing.
16. I never seem to be able to clearly write down my ideas.
17. Writing is a lot of fun.
18. I expect to do poorly in composition classes even before I enter them.
19. I like seeing my thoughts on paper.
20. Discussing my writing with others is an enjoyable experience.
21. I have a terrible time organizing my ideas in a composition course.
22. When I hand in a composition I know I'm going to do poorly.

23. It's easy for me to write good compositions.

24. I don't think I write as well as most other people.

25. I don't like my compositions to be evaluated.

26. I'm no good at writing.

APPENDIX C

Modified Writing Apprehension Test

Questionnaire ____

Below is 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 circling whether you (1) strongly agree, (2) agree, (3) are 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. Thank you for your cooperation in this matter.

SA	A	U	D	SD	
1	2	3	4	5	1. I avoid writing.
1	2	3	4	5	2. I have no fear of my writing being evaluated.
1	2	3	4	5	3. I look forward to writing down my ideas.
1	2	3	4	5	4. My mind seems to go blank when I start to work on a writing project.
1	2	3	4	5	5. Expressing ideas through writing seems to be a waste of time.
1	2	3	4	5	6. I would enjoy submitting my writing to magazines for evaluation and publication.
1	2	3	4	5	7. I like to write my ideas down.
1	2	3	4	5	8. I feel confident in my ability to clearly express my ideas in writing.
1	2	3	4	5	9. I like to have my friends read what I have written.
1	2	3	4	5	10. I'm nervous about writing.
1	2	3	4	5	11. People seem to enjoy what I write.
1	2	3	4	5	12. I enjoy writing.
1	2	3	4	5	13. I never seem to be able to clearly write down my ideas.
1	2	3	4	5	14. Writing is a lot of fun.

S A	A	U	D	S D		
1	2	3	4	5	15.	I like seeing my thoughts on paper.
1	2	3	4	5	16.	Discussing my writing with others is an enjoyable experience.
1	2	3	4	5	17.	It's easy for me to write well.
1	2	3	4	5	18.	I don't think I write as well as most other people.
1	2	3	4	5	19.	I don't like my writing to be evaluated.
1	2	3	4	5	20.	I'm no good at writing.

APPENDIX D

Writing Intensity Questionnaire

Questionnaire ____

On the following questions, please circle the appropriate response (yes or no) after each statement.

A. The first three statements refer to memos which you write at work:

1. I write at least three memos in an average day. Yes No
2. Most of my memos will be seen by at least one person in a position superior to my own. Yes No
3. Most memos that I write must be distributed on the same day I start to write them. Yes No

B. The next three statements concern proposals, plans, and training materials (including such things as protocols, specifications, rationale, job descriptions, standard operating procedures, marketing plans, and goals and objectives):

1. I write at least two proposals, plans, or training materials in an average month. Yes No
2. Most of the proposals, plans, or training materials I write will be seen by at least one person in a position superior to my own. Yes No
3. Most of the proposals, plans, or training materials I write must be distributed within one week of when I start to write them. Yes No

C. The next three statements concern letters which you write at work:

1. I write at least three letters in an average day. Yes No
2. A typical letter that I write will be seen by at least one person in a position superior to my own. Yes No
3. Most letters that I write must be sent out on the same day I start to write them. Yes No

D. The next three statements concern reports (including such things as technical reports, statistical reports, status reports, progress reports, trip reports, appraisals, minutes, abstracts, literature summaries, and notes on experiments):

1. I write at least two reports in an average week. Yes No
2. Most reports that I write will be seen by at least one person in a position superior to my own. Yes No
3. Most reports that I write must be distributed within one week of when I start to write them. Yes No

E. The next three statements concern documents primarily intended for use outside the company (including manuscripts, peer review of others' manuscripts, speeches, presentations, and advertising or promotional pieces):

1. I write at least one document for use outside the company in an average month. Yes No
2. Most of the documents which I write for use outside the company will be seen by at least one person in a position superior to my own. Yes No
3. Most of the documents which I write for use outside the company must be completed within one month of when I start to write them. Yes No

F. The next three statements concern government and legal documents (including position papers and product defense, labels, package inserts, INDs, NDAs, IPRAs, registration documents, and patent applications):

1. I write at least one government or legal document in an average year. Yes No
2. Most of the government or legal documents which I write will be seen by at least one person in a position superior to my own. Yes No
3. Most of the government or legal documents which I write must be completed within two weeks of when I start to write them. Yes No

The next four questions give some very general information about you. Please put checkmarks on the appropriate lines.

1. My job is considered:
   _____ clerical
   _____ technical
   _____ secretarial
   _____ professional
   _____ supervisory
   _____ other (please specify: _____)

2. The highest grade in school I completed was:
   _____ less than 12th grade
   _____ high school graduate
   _____ some college
   _____ college graduate
   _____ master's degree
   _____ doctorate
   _____ other (please specify: _____)

3. I have had the job I now hold:
   _____ less than 2 years
   _____ 2 to 5 years
   _____ 5 to 10 years
   _____ more than 10 years

4. I have had specialized writing training in the form of:
   _____ no special training
   _____ classes
   _____ seminars or workshops
   _____ other (please specify: _____)

APPENDIX E

Original List of Types of Writing Done at Company

Types of writing done at the company:

1. memos
2. letters (including cover letters)
3. manuscripts
4. technical or statistical reports
5. training materials
6. promotional or advertising pieces
7. position papers
8. status reports (monthly, annual, etc.)
9. progress reports
10. appraisals (self or subordinates)
11. proposals

Please add to the list or comment on any of these categories.

APPENDIX F

Comprehensive List of Types of Writing Done at Company

1. memos
2. letters
3. manuscripts
4. technical or statistical reports (in-house)
5. training materials (including instruction manuals)
6. promotional or advertising pieces
7. position papers (including product defenses)
8. status reports (regarding personnel)
9. progress reports (regarding projects)
10. appraisals
11. proposals
12. minutes
13. abstracts
14. literature summaries
15. protocols (for studies); specifications rationale (for production)
16. labels, package inserts
17. job descriptions
18. documents for government agencies (FDA, etc.)
19. peer review of others' manuscripts
20. speeches, presentations
21. notes on experiments
22. standard operating procedures
23. marketing plans

24. legal (patent applications, contracts)
25. planning documents (goals and objectives, summaries)
26. employee information (benefit handbooks, procedure manuals, etc.)

APPENDIX G

Assessment of Writing Intensity by Type and Amount of Writing Projects

Would you please look through the following six categories of writing done in various jobs at the company and then rank-order them according to intensity from 1 (least intense) to 6 (most intense)? I am defining "intensity" as a combination of deadline pressure (how fast do I have to write it?), audience pressure (who reads it? my boss? my peers? people outside the company?), and decision pressure (Will choices be made based on what I write? Can the project help or hurt the company, the unit, etc.?) I don't want to get any more specific, because I want your answers to be subjective--so answer fast and write down your gut reactions. Then if you would, please indicate next to the category how many projects of that type done over what time period you would consider intensive (e.g., 4 per week, 1 a year, 32 a month, etc.). Again, be fast and subjective.

For example, if you consider government documents to be the most intensive of the categories, you would rank it 6; and if you consider completing 2 government documents a year to be intensive, you would write (2 per year) after it.

Again, don't spend much time on this: I want your first reactions. Thanks so much.

Rank Order (1 = least intensive 6 = most intensive)		(number of projects/time period you consider intensive)
_____	proposals, plans, and training materials (including such things as protocols, specifications, rationale, job descriptions, standard operating procedures, marketing plans, and goals and objectives)	(_____)
_____	documents for use outside the company (including manuscripts, speeches, presentations, and advertising or promotional pieces)	(_____)
_____	memos	(_____)
_____	government and legal documents (including position papers and product defense, labels, package inserts, INDs, NDAs, IPRAs, registration documents, and patent applications)	(_____)

_____	reports (including such things as technical reports, statistical reports, status reports, progress reports, appraisals, minutes, abstracts, literature summaries, and notes on experiments)	(_____)
_____	letters	(_____)

APPENDIX H

Assessment of Writing Intensity by Audience and Deadline Pressure

For each of the categories of writing projects done at the company, would you please tell me the following:

1. How many people in positions superior to your own (or with power over you) normally see one of these projects?
2. How many people whose opinion you value, even though their positions are not superior to yours, will normally see one of these projects?
3. How long do you usually work on one of these projects (from the time you start until it is completed)?

Please don't spend much time on this. What I really need are your gut reactions.

	# of superiors	# of others	time allowed
proposals, plans and training materials (including such things as protocols, specifications, rationale, job descriptions, standard operating procedures, marketing plans, and goals and objectives)	_____	_____	_____
documents for use outside the company (including manuscripts, peer review of others' manuscripts, speeches, presentations, and advertising or promotional pieces)	_____	_____	_____
memos	_____	_____	_____
government and legal documents (including position papers and product defense, labels, package inserts, INDs, NDAs, IPRAs, registration documents, and patent applications)	_____	_____	_____

reports (including such things as technical reports, statistical reports, status reports, progress reports, appraisals, minutes, abstracts, literature summaries, and notes on experiments)	_____	_____	_____
letters	_____	_____	_____

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