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The following two studies are part in a series in a continuing research project which is looking at the interrelation between attitudes, particularly apprehension about writing, and various other outcomes. Fear of writing may not only produce less adept writing; it may be reflected in career choice and other far-reaching consequences. These studies indicate a cumulative effect of certain aspects of school on people's lives.

—Reviewed by R.W. and S.W.L.

The Empirical Development of an Instrument to Measure Writing Apprehension

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Most teachers of composition have recognized in their classes students who seem to be unduly apprehensive about writing. An antecedent to helping these students is discovering exactly who they are. Simple observation is not enough. As well intentioned as observation may be, incorrect impressions may easily be formed through numerous misinterpretations of the students' behavior. It seems reasonable to suggest that a more effective and efficient means of isolating apprehensive student writers would be through an empirically based, standardized instrument. This short report discusses the initial development of such an instrument as well as the rationale and future directions that may be taken in discovering the role, the effects, and the treatment of what we have termed *writing apprehension*.

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**An Analogy
to Oral
Communication
Apprehension**

Composition is not the only discipline to recognize such anxiety and its possible detrimental effects on students. During the last few years a number of investigators in the field of speech communication have examined the role of anxiety about or apprehension of interpersonal communication plays in human interaction (e.g., Clevenger, 1959; Heston & Paterline, 1974; Phillips & Metzger, 1973; Wheelless, 1974). The conclusion of this research is that communication apprehension is a pervasive anxiety trait that seriously affects a large proportion of the population.

Phillips (1968) perhaps offers the best definition of this anxiety. The highly apprehensive individual is the "person for whom anxiety about communication outweighs his projection of gain from the situation (p. 40)." In other words, the highly apprehensive individual will avoid communication situations or react in some anxious manner if forced into them because he foresees primarily negative consequences from such engagements. Specific research findings have indicated that highly apprehensive individuals tend to be less motivated to achieve (Giffin & Gilham, 1971) and generally engage in less self-disclosure (Hamilton, 1972). Additionally, they tend to select occupations that they perceive to require less communication (Daly & McCroskey, 1975), as well as choose housing and seating positions that require less communication (McCroskey & Lepard, 1974). High communication apprehensives seldom engage in small group interaction (Daly, 1974) and when forced to, offer mainly irrelevancies (Wells & Lashbrook, 1970). As one would expect, research has also demonstrated that individuals who have such apprehension tend to be lower in their self concept than others (e.g., Johnson, 1973; McCroskey & Daly, 1974). This lowered self concept is reflected and reinforced by those they interact with. Quiggins (1972) has demonstrated that they tend to receive lower rankings in groups on both credibility and interpersonal attraction.

**Measuring
Anxiety about
Communication**

The measurement of this phenomenon has taken many forms. Phillips (1968) and his associates have argued for a primarily observational-interview approach. Porter (1973) as well as others (e.g., Doppleman & McNair, 1971; Karst & Most, 1973) have suggested physiological measures such as galvanic skin response and heart beat measures. On the other hand, a number of researchers have utilized factor-based self-report instruments (e.g., Friedrich, 1970; McCroskey, 1970); Heston & Paterline, 1974; Wheelless, 1974). Clevenger (1959) made clear the relative lack of agreement between these approaches to measurement. The findings of one method are seldom very similar to the findings arrived at through another method. McCroskey (1970) suggested the rationale for a self-report type instrumentation by comparing this method with the others. He noted that the observer-interview approach suffers from a general lack of reliability, and, more importantly, is based upon overt observable behaviors whereas much that isolates the apprehensive person from others is not readily observable. The physiological approach is quite expensive and inherently suffers

from a lack of transferability. One would have to measure physiological responses in many settings prior to any diagnosis. Most importantly, physiological measures tend to tap state rather than trait anxiety. That is, physiological results are topic and situation specific, while the definition of apprehension as a trait measure explicitly demands a generalized, non-specific measure.

A self-report instrument to measure apprehension solves the problems associated with the other approaches. The expense is small, the administration simple and quick, and the measurement more general and oriented towards the trait anxiety. Finally, this approach allows for numerous reports from which may be summed the individuals' level of apprehension on an interval scale.

**WRITING
APPREHENSION AS A
PROBLEM**

Basic composition courses on both high school and college level place a great deal of emphasis on writing, and justifiably so. Our age demands competence in writing. Naming an occupation where writing is not a requirement is difficult. Although it may not be a composition or essay that is required, most individuals must daily face the demand for writing competency.

Given the research on communication apprehension and its effects we felt that there might reasonably exist a general anxiety about writing as well. There may be a large number of individuals who fail miserably in an environment where writing is demanded because of an apprehension or anxiety about writing. In a very general sense, these individuals are those who find the demand for writing competency exceedingly frightening.

Individuals with high apprehension of writing would fear evaluation of their writing, for example, feeling that they will be negatively rated on it. Thus they avoid writing when possible and when forced to write exhibit high levels of anxiety. They expect to fail in writing, and logically they should since they seldom engage in it. In classroom situations they will be the individuals who consistently fail to turn in compositions, who do not attend class when writing is required, and who seldom enroll voluntarily in courses where writing is known to be demanded. Outside of the classroom we wouldn't expect to find them engaged in extra-curricular activities that require writing such as journalism. They will seek occupations they view as requiring little writing, and if, unexpectedly, they find themselves placed in positions where writing is demanded will report that they are unhappy.

Discussions with a number of basic composition teachers on both the high school and college level revealed that such students do exist. A constant problem however was in isolating those students through some efficient means that was accessible to teachers and at the same time reliable in measuring the trait. The development of such an instrument was the purpose of this research.

**INSTRUMENT
DEVELOPMENT**

Sixty-three items were composed into Likert-type scale format, each with five possible responses. Items were modeled after those presently in use in the measurement of communication apprehension (McCroskey, 1970), unwillingness to communicate (Heston

& Paterline, 1974), receiver apprehension (Wheless, 1974), and general public speaking apprehension (McCroskey, 1970). Items were constructed so that they dealt with some form of apprehension about writing. Here we subdivided into a number of categories. These included items that dealt with anxiety about writing in general, teacher evaluation of writing, peer evaluation of writing, as well as professional (e.g., publishers and magazine editors) evaluations. Additionally we sought to provide items concerning letter writing, environments for writing (e.g., at home or in the classroom), writing in tests (e.g., success on objective tests compared to success on essay type tests) and self-evaluation of writing and its worth. The valences of the items were random in an attempt to prevent any response bias due to the direction of items.

The sixty-three item instrument was completed by 164 undergraduate students enrolled in basic composition courses and interpersonal communication courses at the West Virginia University during the Spring, 1974. Participation was entirely voluntary; however there were no refusals. Subjects were taken from composition courses as well as speech communication courses since it seemed possible that individuals high in writing apprehension would avoid writing courses in favor of other courses less oriented towards writing such as those offered in speech communication. The subjects involved in the study included students from all of the colleges and schools of the University, represented several states, and came from a variety of social, economic, and family backgrounds.

Data was submitted to principle components factor analysis with orthogonal rotation as determined by Kaiser's varimax criterion (Kaiser, 1958; Morrison, 1967). An eigenvalue of 1.0 was set for termination of factor extraction. To retain a factor it was established that there be at least two items with satisfactory loadings (.60 or higher) on that factor with no secondary loadings of above .40.

RESULTS Initially a two factor solution appeared as best given the
OF THE considerations listed above. However, examination of the
ANALYSIS items and their respective factor loadings indicated that the
 apparent multidimensionality of the factors was a function of
 item valences. That is, all of the positive items loaded on one factor while the
 negative items were all found on the other factor.

Consequently, a one factor solution was generated. After a factor purification procedure was completed (i.e., dropping all the items not loading above .57 and rerunning the factor analysis) twenty-six items, all with loadings above .60, were selected to compose the initial instrument. These twenty-six items accounted for 46% of the total variance. For clarity, negatively worded items were reflected in the final analysis. A copy of the instrument as well as directions for the completion of the instrument may be found in Table 1.

The reliability of the instrument was obtained by a split half technique. In this case, the top half of the test was compared with the bottom half. Corrected for attenuation the obtained reliability was .940. Test-retest reliability of the instrument over a week was .923.

TABLE I
Items and One Factor Loadings—Final Items

Directions: Below are a series of statements about writing. There are no right or wrong answers to these statements. Please indicate the degree to which each statement applies to you by 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.

(+)	1. I avoid writing	0.63678
(-)	2. I have no fear of my writing being evaluated	0.64685
(-)	3. I look forward to writing down my ideas	0.66073
(+)	4. I am afraid of writing essays when I know they will be evaluated	0.66799
(+)	5. Taking a composition course is a very frightening experience	0.62001
(-)	6. Handing in a composition makes me feel good	0.69229
(+)	7. My mind seems to go blank when I start to work on a composition	0.62360
(+)	8. Expressing ideas through writing seems to be a waste of time	0.69560
(-)	9. I would enjoy submitting my writing to magazines for evaluation and publication	0.66996
(-)	10. I like to write my ideas down	0.70622
(-)	11. I feel confident in my ability to clearly express my ideas in writing	0.71996
(-)	12. I like to have my friends read what I have written	0.64019
(+)	13. I'm nervous about writing	0.62608
(-)	14. People seem to enjoy what I write	0.63153
(-)	15. I enjoy writing	0.80043
(+)	16. I never seem to be able to clearly write down my ideas	0.68342
(-)	17. Writing is a lot of fun	0.69795
(+)	18. I expect to do poorly in composition classes even before I enter them	0.63622
(-)	19. I like seeing my thoughts on paper	0.74815
(-)	20. Discussing my writing with others is an enjoyable experience	0.62174
(+)	21. I have a terrible time organizing my ideas in a composition course	0.66678
(+)	22. When I hand in a composition I know I'm going to do poorly	0.66088
(-)	23. It's easy for me to write good compositions	0.78479
(+)	24. I don't think I write as well as most other people	0.68799
(+)	25. I don't like my compositions to be evaluated	0.64887
(+)	26. I'm no good at writing	0.63264

**Scoring and
Revising the
Instrument**

Scoring the initial instrument is both simple and fast and may be done either by hand or through machine computation. The formula for the twenty-six item instrument is:

$$\text{Writing Apprehension} = 78 + \text{Positive Scores} - \text{Negative Scores.}$$

Scores.

Scores may range from a low of 26 to a high of 130. In our sample we found that the mean score was 79.28 with a standard deviation of 18.86.

If one desires to utilize this instrument outside of the classroom, items that specify class activity should be omitted. Items 4, 5, 6, 18, 21, and 22 would be omitted and the scoring formula would be:

$$\text{Writing Apprehension} = 48 + \text{Positive Scores} - \text{Negative Scores}$$

In this case scores would range from a low of 21 to a high of 105. In our research the mean score using this instrument was 55.27 with a standard deviation of 18.86.

tion 15.37. For this instrument the reliability coefficient was .921. Correlating these two instruments resulted in a product moment correlation of .99 indicating that they were essentially measuring the same construct.

TESTING THE VALIDITY OF THE INSTRUMENT

The materials presented above suggest that we have developed an instrument that reliably measures apprehension. A necessary step in instrument development past generation of that instrument is testing its validity in measuring the construct it was designed to tap. Certainly there is face validity to the instrument items. They seem to represent the construct. But apart from this face validity, predictive success is demanded if we are to retain the instrument. A recent study has been conducted that provides some evidence for the predictive validity of the instrument.

Daly and McCroskey (1975) found that individuals with high communication apprehension chose occupations which they perceived to have low oral communication requirements. Not only were their actual choices consistent with their level of anxiety, but in addition, their perceptions of the desirability of a number of other occupations were significantly predicted on the basis of apprehension of communication scores. Following such a line of reasoning, we suspect that individuals with high levels of writing apprehension would tend to view their occupations as having significantly less required writing than would their counterparts with low anxiety about writing.

One hundred and seventy-six adults completed the twenty item writing apprehension instrument during extension courses conducted by West Virginia University during the Summer, 1974. At the end of the courses, subjects completed another questionnaire which included a seven step Likert-type scale that stated: "The writing requirements of my job are very great." Possible responses ranged from strongly agree to strongly disagree.

A one-way analysis of variance in writing requirements with three levels of apprehension was used to test for the hypothesized differences. Individuals scoring one standard deviation above the mean score on writing apprehension were classified as high apprehensives ($n = 34, \bar{X} > 68$), while those below 39 were classified as low anxious individuals. The remaining subjects were classified as moderate in their anxiety ($n = 116$).

The analysis of variance revealed a significant effect for writing apprehension on perceived communication requirements ($F = 14.78, df = 2/173, p < .05$). Table 2 provides a summary of the analysis. Given the significant F , differences between means were examined via Scheffe's procedure. Individuals with high anxiety of writing ($\bar{X} = 4.29$) perceived their occupations as having significantly less (m.d. = 1.948, $p < .05$) written communication requirements than did those with low apprehension of writing ($\bar{X} = 2.346$). Significant differences were also found (m.d. = 1.354, $p < .05$) between those high in anxiety and those classified as moderate ($\bar{X} = 2.940$). No significant differences were observed between low and moderate apprehensives.

TABLE II
Summary Table for Analysis of Variance on
Writing Requirements

Source of Variation	SS	df	MS	F
Writing Apprehension	66.206	2	33.103	14.778*
Within	387.521	173	2.240	
Total	453.727	175	2.240	

* $P < .05$

**DISCUSSION
AND
CONCLUSION**

The research reported above suggests that we have developed a reliable and valid instrument for the measurement of writing apprehension. The next question to be posed concerns treatment methodologies available for helping apprehensive writers. The procedure commonly used of forcing students to write is very likely the wrong choice of treatments. All one is doing is reinforcing the punishing nature of the writing act in those situations. Such a phenomenon has already been demonstrated in communication apprehension research (e.g., Brooks & Platz, 1965).

Drawing from the research on communication apprehension we may however suggest that effective treatments do exist. One means would be through counseling programs where the apprehensive writer would be allowed to view writing as a successful experience. Alternatively, a number of behavior therapies might be functional in treating anxiety about writing. Systematic desensitization is one such strategy that has been found successful (e.g., McCroskey, 1972) in dealing with communication anxiety.

Future research must deal explicitly with the treatment of anxious students as well as the effects of writing apprehension. We would suspect that the instrument would be predictive of classroom variables such as success in compositions (measured through grades, teacher evaluation, etc.) and perceived success in other writing oriented courses. Given a free essay (i.e., where no length is specified) one might measure the length, complexity, intensity, intimacy, and general structure predicting differences between high and low apprehensives. Additional variables would include any number of stylistic measures such as redundancy, egocentricism, and general readability. Current research is investigating some of these. An additional area of necessary research is the comparison of this instrument to others of a similar nature to test its relative independence.

Obviously much work still needs to be done in writing apprehension. The data reported here are exploratory and only an initial attempt in this direction. Measuring accurately this phenomenon should increase our understanding of writing and student predispositions towards that activity.

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